Service Manual

ST-8055/K

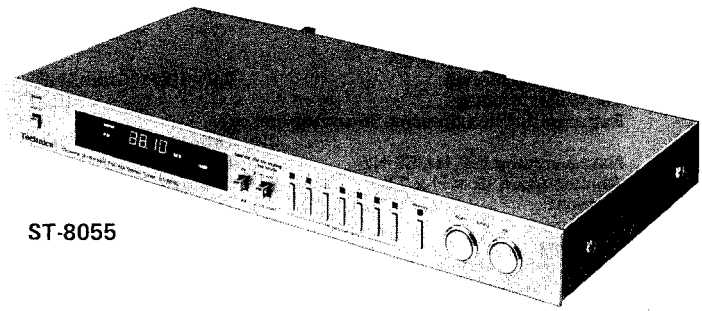
Quartz Synthesizer FM/AM Stereo Tuner

ST-8055

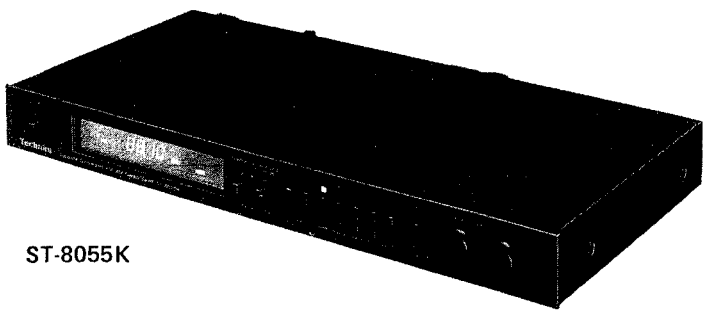
(E), (EG), (XA), (XE),
(EB), (XGH), (XGF)

ST-8055K

(E), (EG), (XA), (XGH)



ST-8055



ST-8055K

* The models ST-8055 (E, EG) and ST-8055K (E, EG) are available in Scandinavia and European only.
* The models ST-8055 (XA) and ST-8055K (XA) are available in Asia, Latin America, Middle East and Africa only.
* The model ST-8055 (XE) is available in United Kingdom only.
* The model ST-8055 (EB) is available in Belgium only.
* The models ST-8055 (XGH) and ST-8055K (XGH) are available in Holland only.
* The model ST-8055 (XGF) is available in France only.

TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

[DIN 45 500]

FM TUNER SECTION

Frequency range*		87.50 ~ 108.00 MHz
Antenna terminals		300Ω (balanced), 75Ω (unbalanced)
Sensitivity		1.9 μV (IHF, usable)
S/N 30 dB		1.9 μV (300Ω), 1.3 μV (75Ω)
S/N 26 dB		1.7 μV (300Ω), 1.2 μV (75Ω)
S/N 20 dB		1.5 μV (300Ω), 0.9 μV (75Ω)
IHF 46 dB stereo quieting sensitivity		25 μV (75Ω)
Total harmonic distortion	**MONO**	0.15%
	STEREO	0.3%
S/N	**MONO**	69 dB (IHF: 75 dB)
	STEREO	65 dB (IHF: 70 dB)
Frequency response		20 Hz ~ 15 kHz, +0.5 dB ~ −1.5 dB
Alternate channel selectivity (±400 kHz)		75 dB
Capture ratio		1.0 dB
Image rejection at 98 MHz		65 dB
IF rejection at 98 MHz		100 dB
Spurious response rejection at 98 MHz		90 dB
AM suppression		55 dB
Stereo separation	**1 kHz**	45 dB, **10kHz** 35dB
Carrier leak	**19 kHz**	−35 dB(IHF: −37 dB)
	38 kHz	−48 dB(IHF: −50 dB)
Limiting point		1.2 μV
Power bandwidth	**IF amplifier**	180 kHz
	FM demodulator	1000 kHz
Channel balance (250 Hz ~ 6300 Hz)		±1.0 dB

AM TUNER SECTION

Frequency range*	531 ~ 1602 kHz
Sensitivity (S/N 20 dB)	30 μV, 350 μV/m
Selectivity (±9 kHz)	55 dB
Image rejection at 1000 kHz	45 dB
IF rejection at 1000 kHz	50 dB

GENERAL

Output voltage	0.3V (0.6V, IHF)
Power consumption	12W
Batteries for memory back-up (optional)	three "AA" size batteries DC 4.5V
Power supply (50 Hz/60Hz)	110V/120V/220V/240V
Dimensions (W x H x D)	430 x 53 x 240 mm (16-15/16" x 2-3/32" x 9-7/16")
Weight	2.8 kg (6.2 lb.)

Note:
For some countries, this unit is equipped with an FM/AM frequency-interval selector. The specifications shown above are correct with this switch set to the "FM 50 kHz/AM 9 kHz" position. If it is set to the "FM 200 kHz/AM 10kHz" position, however, the FM frequency range becomes 88.1 ~ 107.9 MHz, and the AM frequency range becomes 530 ~ 1610 kHz.

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

TECHNISCHE DATEN

Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

[DIN 45 500]

UKW-TUNERTEIL

Frequenzgang*		87,50 ~ 108,00 MHz
Antennenanschluss		300Ω (symmetrisch), 75Ω (unsymmetrisch)
Empfindlichkeit		1,9 µV (nutzbar nach IHF)
30 dB Rauschabstand		1,9 µV (300Ω), 1,3 µV (75Ω)
26 dB Rauschabstand		1,7 µV (300Ω), 1,2 µV (75Ω)
20 dB Rauschabstand		1,5 µV (300Ω), 0,9 µV (75Ω)
46 dB Rauschabstand utilisable Empfindlichkeit nach IHF		25 µV (75Ω)
Klirrfaktor	**MONO**	0,15%
	STEREO	0,3%
Rauschabstand	**MONO**	69 dB (75 dB nach IHF)
	STEREO	65 dB (70 dB nach IHF)
Frequenzgang		20 Hz ~ 15 kHz (+0,5 dB ~ −1,5 dB)
Selektivität (±400 kHz)		75 dB
Gleichwellen-Selektion		1,0 dB
Spiegelfrequenzunterdrückung bei 98 MHz		65 dB
ZF-Festigkeit bei 98 MHz		100 dB
Unselektivität-Dämpfung bei 98 MHz		90 dB
AM-Unterdrückung		55 dB
Kanaltrennung	**1kHz**	45 dB. **10 kHz** 35 dB
Hilfsträgerdämpfung (Pilotton)		
	19 kHz	−35 dB (−37 dB nach IHF)
	38 kHz	−48 dB (−50 dB nach IHF)
Begrenzungseinsatz		1,2 µV
Bandbreite	**ZF-Verstärker**	180 kHz
	Ratiodetektor	1000 kHz
Kanalabweichung (250 Hz ~ 6300 Hz)		±1,0 dB

MW-TUNERTEIL

Frequenzgang*	531 ~ 1602 kHz
Empfindlichkeit (20 dB Rauschabstand)	30 µV, 350 µV/m
Selektivität (± 9 kHz)	55 dB
Spiegelfrequenz-Selektion bei 1000 kHz	45 dB
ZF-Festigkeit bei 1000 kHz	50 dB

ALLGEMEINE DATEN

Ausgangssapannung	0,3V (0,6V, nach IHF)
Leistungsaufnahme	12 W
Batterien für den Speicher (Sonderzubehör)	drei Batterien "AA" (4,5V)
Netzspannung (50 Hz/60 Hz)	110V/120V/220V/240V
Abmessungen (B x H x T)	430 x 53 x 240 mm
Gewicht	2,8 kg

***Bemerkung:**

In einigen Ländern ist dieses Gerät mit einem UKW/MW-Intervallgrößenwähler ausgestattet. Die obenstehenden Angaben gelten, wenn der Schalter auf "FM 50 kHz/AM 9 kHz" steht. Wenn er aber in der Position "FM 200 kHz/AM 10 kHz" steht, ändert sich der UKW-Wellenbereich zu 88,1 ~ 107,9 MHz und der MW-Wellenbereich zu 530 ~ 1610 kHz.

CARACTERISTIQUES TECHNIQUES

Sujet à changement sans préaris.

[DIN 45 500]

PARTIE TUNER FM

Gamme de fréquence*		87,50 ~ 108,00 MHz
Impédance d'antenne		300Ω (symétrique) 75Ω (asymétrique)
Sensibilité		1,9 µV (IHF utilisable)
Signal/bruit 30 dB		1,9 µV (300Ω), 1,3 µV (75Ω)
Signal/bruit 26 dB		1,7 µV (300Ω), 1,2 µV (75Ω)
Signal/bruit 20 dB		1,5 µV (300Ω), 0,9 µV (75Ω)
IHF Sensibilité pour S/B 46 dB		25 µV (75Ω).
Distorsion harmonique total	**MONO**	0,15%
	STEREO	0,3%
Signal/bruit	**MONO**	69 dB (IHF: 75 dB)
	STEREO	65 dB (IHF: 70 dB)
Réponse de fréquence		20 Hz ~ 15 kHz, +0,5 dB ~ −1,5 dB
Sélectivité en canaux alternés (±400 kHz)		75 dB
Taux de capture		1,0 dB
Réjection de fréquence image à 98 MHz		65 dB
Réjection FI à 98 MHz		100 dB
Réjection de réception non sélective à 98 MHz		90 dB
Suppression AM		55 dB
Speparation stéréophonique	**1 kHz**	45 dB, **10kHz** 35 dB
Courant porteur de dispersion	**19 kHz**	−35 dB (−37 dB, IHF)
	38 kHz	−48 dB (−50 dB, IHF)
Point de limite		1,2 µV
Largeur de bande	**Amplificateur FI**	180 kHz
	Démodulateur FM	1000 kHz
Equilibrage de canaux (250 Hz ~ 6300 Hz)		±1,0 dB

PARTIE TUNER AM

Gamme de fréquence	531 ~ 1602 kHz
Sensibilité (Rapport S/B 20 dB)	30 µV, 350 µV/m
Sélectivité (±9 kHz)	55 dB
Réjection de fréquence image à 1000 kHz	45 dB
Réjection FI à 1000 kHz	50 dB

GENERALITES

Tention de sortie	0,3 V (0,6 V' IHF)
Consommation	12 W
Piles pour préservation des mémoires (en option)	trois piles de type AA (C.C.: 4,5V)
Alimentation (50 Hz/60 Hz)	110V/120V/220V/240V
Dimensions (L x H x Pr)	430 x 53 x 240 mm
Poids	2,8 kg

***Nota:**

Cet appareil est doté, pour certains pays, d'un sélecteur d'intervalle de fréquence FM/AM. Les spécifications- indiquées ci-dessus sont applicables si ce sélecteur est sur la position "FM 50 kHz/AM 9 kHz". S'il est sur la position "FM 200 kHz/AM 10 kHz", les gammes de fréquence FM et AM deviennent respectivement 88,1 ~ 107,9 MHz et 530 ~ 1610 kHz.

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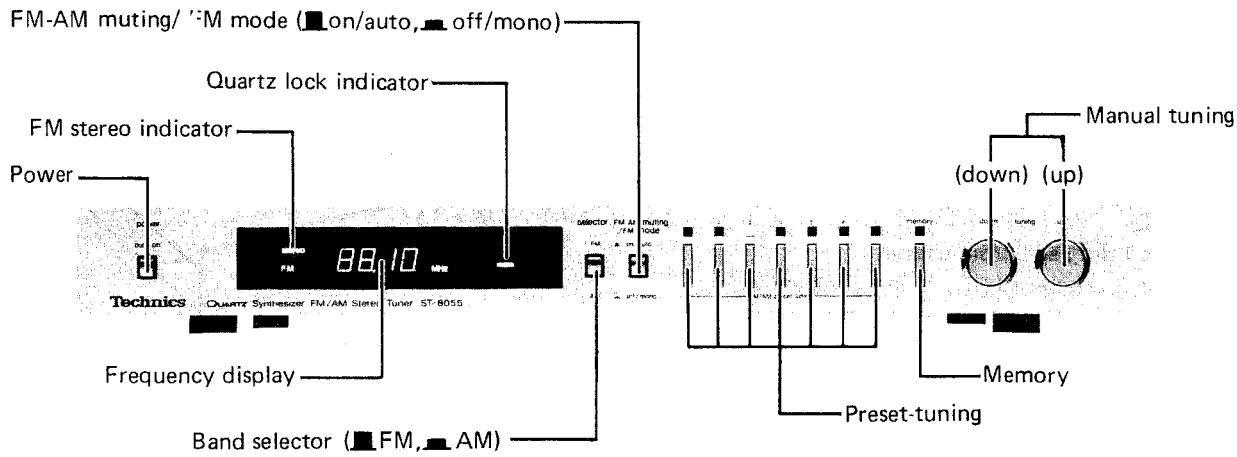
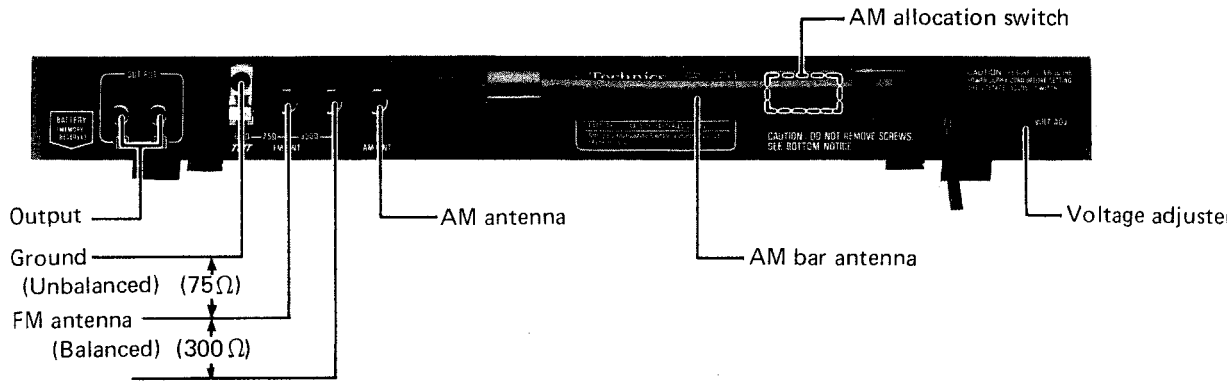
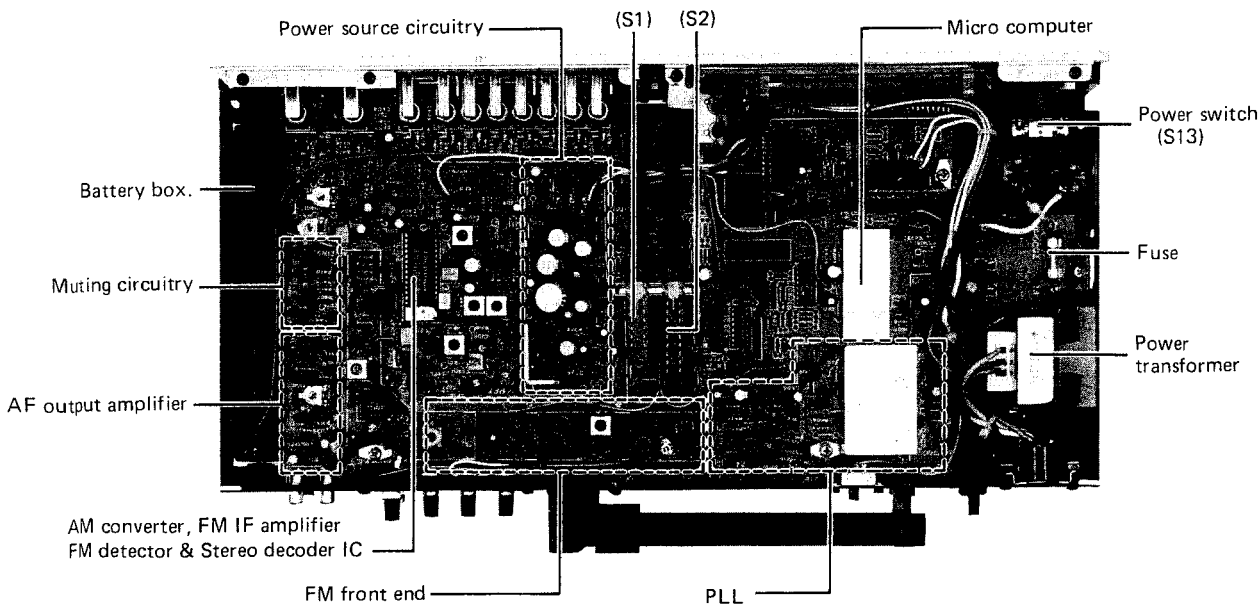
■ LOCATION OF CONTROLS



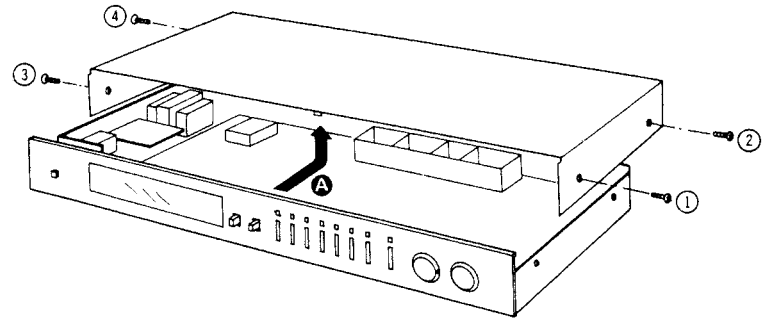


* This photo shows only the products for (XA).
* The product for other destinations except (XA) is not equipped with AM allocation switch.

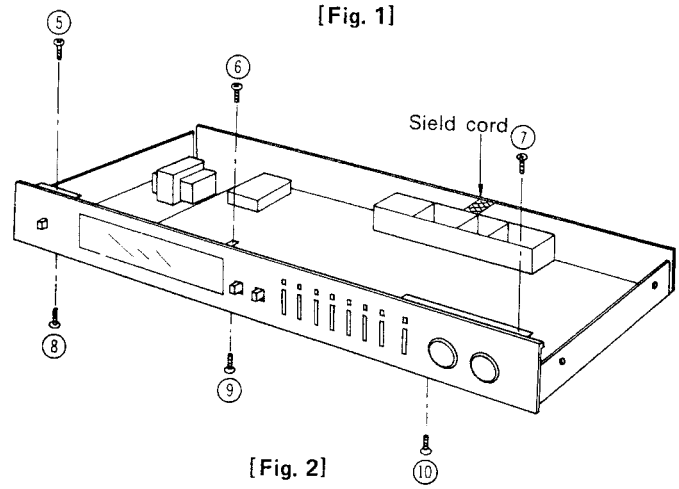


■ HOW TO REMOVE THE CHASSIS

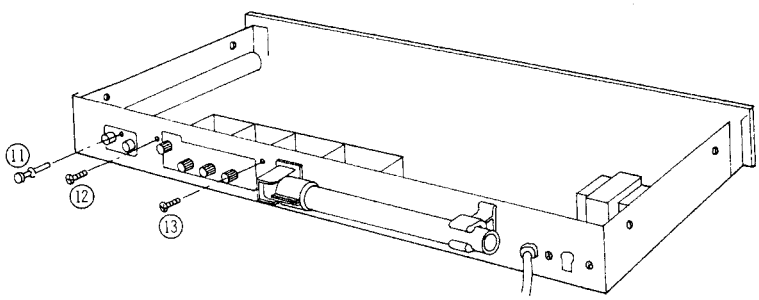
1. Detach the cabinet by removing the 4 setscrews (① ~ ④ in fig. 1)
2. Sliding it toward Ⓐ direction and lifting it upward as shown in fig. 1.
3. Remove the 6 setscrews on the front panel (⑤ ~ ⑩ in fig. 2)
4. Remove the front panel from chassis.
5. Remove the 2 setscrews (⑫ , ⑬ in fig. 3) and the latch (⑪ in fig. 3) used to secure the antenna terminal and output terminal.
6. Unsolder sield cord from rear panel.
7. Remove the 3 setscrews (⑭ ~ ⑯ in fig. 4) of the printed circuit board.
8. The frequency indication plate is fixed on the cahssis as shown in Fig. 5. So, push the indication plate a little forwards and lift it up.
   Then it can be removed from the chassis. (See Fig. 6.)
   Next, set up the printed circuit board while being careful of the leads. (Arrow Ⓑ in Fig. 4)
9. After completion of the repair, assemble the parts by reversing the procedure 1 ~ 8.



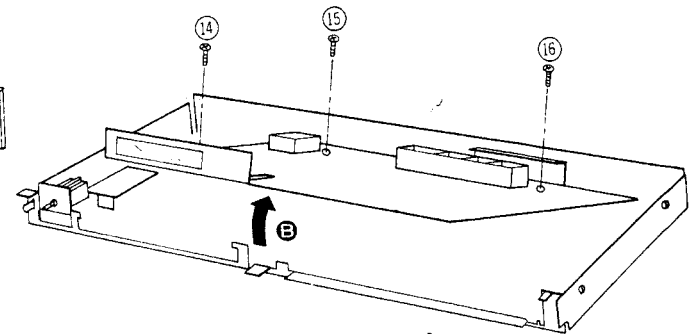
[Fig. 1]



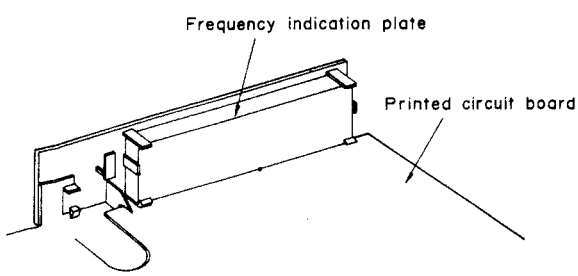
[Fig. 2]



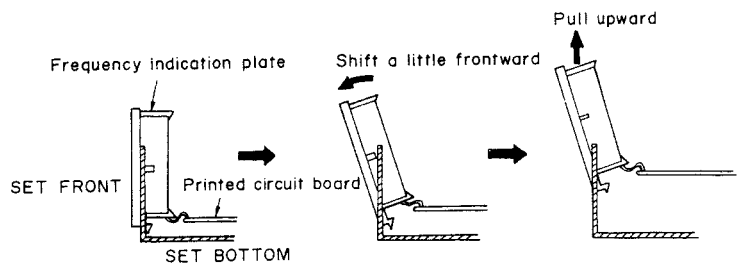
[Fig. 3]



[Fig. 4]

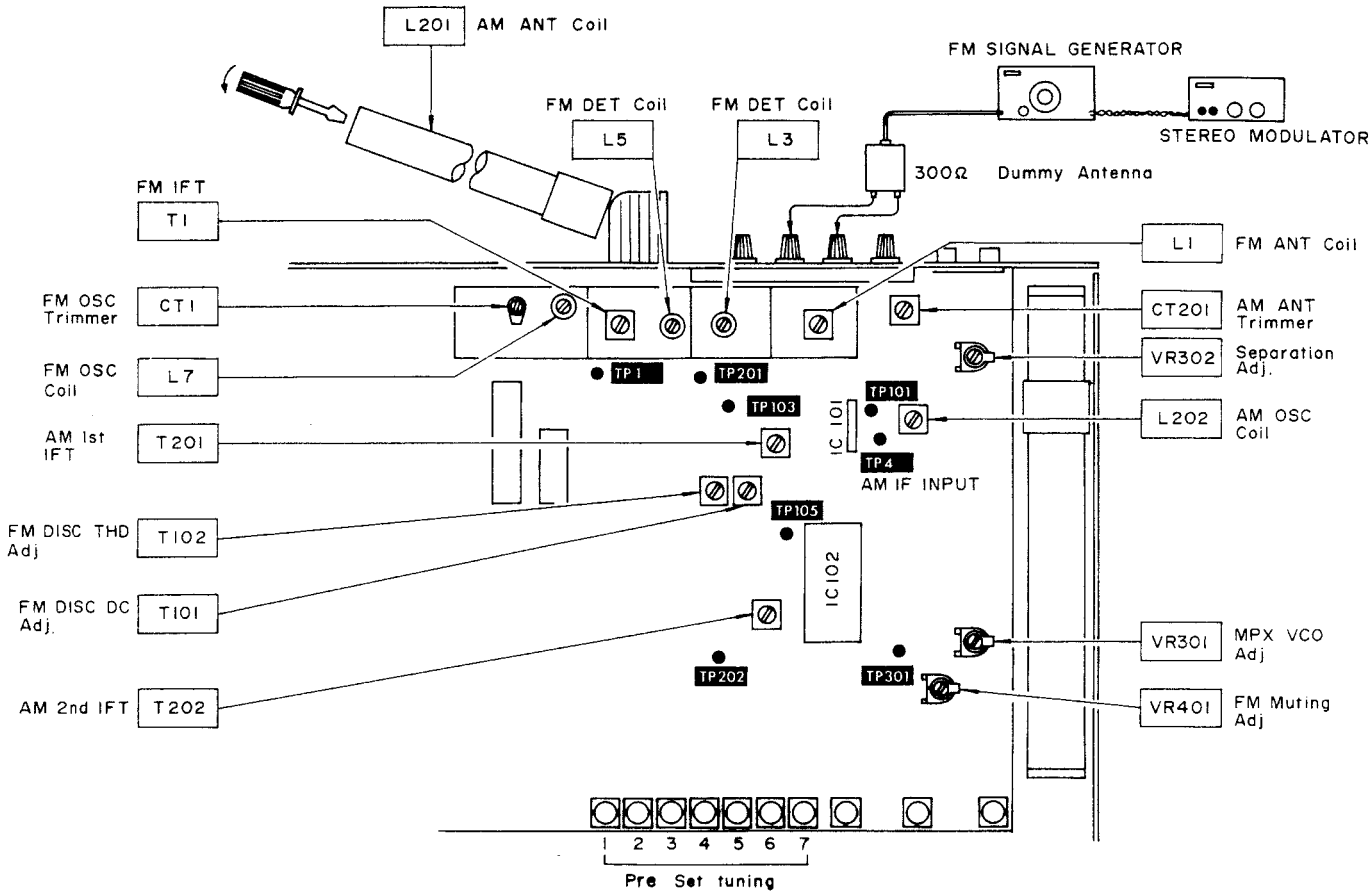


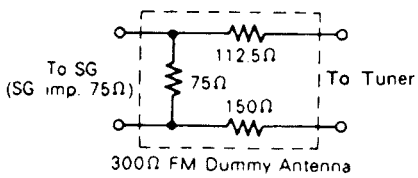
[Fig. 5]



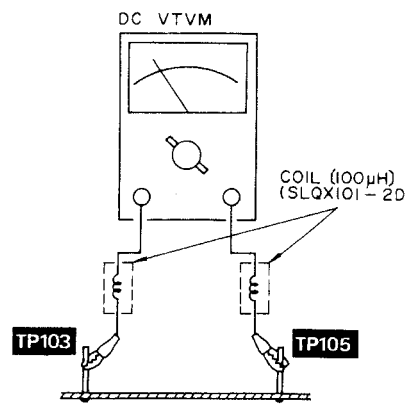
[Fig. 6]

■ ALIGNMENT POINTS

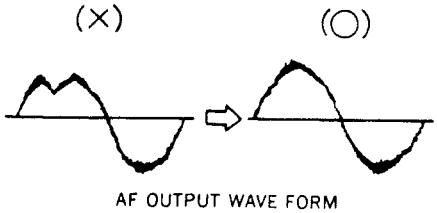




[Fig. 7]
(Abb. 1)

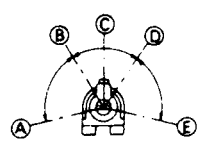


[Fig. 8]
(Abb. 2)



AF OUTPUT WAVE FORM

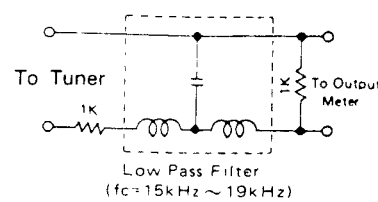
[Fig. 9]
(Abb. 3)



VR301

A – B, D – E: Stereo OFF Position.
B – D: Stereo ON Position (Indicator Lighting).
C: Adjust Point of Pilot Circuit.

[Fig. 10]
(Abb. 4)



[Fig. 11]
(Abb. 5)

■ ALIGNMENT INSTRUCTIONS ENGLISH

Notes:

1. Band selector switch . . . . . { AM (AM alignment) / FM (FM Alignment)
2. FM muting & mode switch . . . . . off/mono
3. Maintain line voltage at rated voltage
4. 300Ω FM dummy antenna . . . . . Refer to fig. 7
5. Output of signla generator should be on higher than necessary to obtain an output reading.
6. Adjust the antenna coil (L201) position by using a screw-driver so that it is at approximately 25 degrees to the rear panel.

	AM/FM SIGNAL GENERATOR		FREQUENCY SETTING	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	AM ALIGNMENT					
1	High side to TP4 terminal. Common to chassis.	450kHz (30% Mod. with 400 Hz)	Point of non-inter-ference	Connect AC VTVM or scope to "OUTPUT" terminals.	T201 (1st IFT) T202 (2nd IFT)	Adjust for maximum output.
2	Fashion loop of several turns of wire and radiate signal into loop of tuner	531kHz (30% Mod. with 400 Hz)	531kHz	Connect DC VTVM to TP201 terminal.	L202 (OSC Coil)	Adjust L202 to 1.0 ±0.05V.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner	612kHz (30% Mod. with 400 Hz)	612kHz	Connect AC VTVM or scope to "OUTPUT" terminal.	L201 (ANT Coil)	Adjust for maximum output. Adjust ferrite core of L201 by screw driver.
4	Fashion loop of several turns of wire and radiate signal into loop of tuner	1503kHz (30% Mod. with 400Hz)	1503kHz	Connect AC VTVM or scope to "OUTPUT" terminal.	CT201 (ANT Trimmer)	Adjust for maximum output Repeat steps (3) and (4).
	FM IF ALIGNMENT					
5		No-Signal	Point of non-inter-ference	Connect DC VTVM to TP103, TP105 terminals (Refer to fig. 8)	T101 (DISCRI IFT) A	1. FM muting/mode switch "on/auto" position. 2. Adjust T101 (A) core so that voltage measured in signal mode is 0V in 300mV range.
	FM RF ALIGNMENT					
6		No-Signal	87.50MHz	Connect DC VTVM to TP1 terminal	L7 (OSC Coil)	Adjust L7 (OSC Coil) to 3.0V
7	Connect to FM 300Ω antenna terminal through 300Ω. FM dummy antenna.	90.10MHz (100% Mod. with 400Hz) weak input	90.10MHz	Connect scope to "OUTPUT" terminal.	L3 (RF DET Coil, 1st) L5 (RF DET Coil, 2nd) L1 (ANT Coil) T1 (FM IFT)	1. Add weak input so that noise is included in the output wave form. 2. Make the adjustment so that the output wave form is vertically symmetrical. Refer to fig. 9 3. Repeat the steps (7) and (8)
8		106.10MHz (100% Mod. with 400Hz)	106.10MHz	Connect scope to "OUTPUT" terminal.	CT1 (OSC Trimmer)	
	FM MONO DISTORTION ALIGNMENT					
9	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	100.10MHz (100% Mod. with 400Hz, 60dB)	100.10MHz	Connect distortion meter to "OUTPUT" terminals.	T102 (DISCRI IFT) B	1. Set the FM muting/mode switch to "on/auto" and then check step (5) in no signal mode. 2. If it is deflected, re-adjust of T101. 3. Adjust T102 (B) core so that distortion of right and left channels are minimized.
	FM MUTING LEVEL ALIGNMENT					
10	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna. Apply 16dB (6.3μV) to tuner	100.10MHz (100% Mod. with 400Hz)	100.10MHz		VR401 (Muting Level)	1. Set the muting/FM mode switch to "off/mono" and then tune in 100.10MHz. 2. With the muting/FM mode switch set to "on/auto", adjust VR401 so that the output is given with muting condition released.

	FM MPX PILOT ALIGNMENT					
	USING A FREQUENCY COUNTER			USING ALTERNATE SYSTEM		
11	1. 100.10MHz Non-modulated mono signal applied to set. 2. FM muting/mode switch to "on/auto" 3. Connect frequency counter to TP301 through resistor (100kΩ). 4. Adjust VR301 to 19kHz, ±30Hz.			1. Apply stereo signal from generator or stereo station to tuner. 2. Adjust VR301 until stereo indicator lights up. Cement arm of VR301 as shown in fig. 10.		
	FM SIGNAL GENERATOR		FREQUENCY SETTING	INDICATOR	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	SEPARATION ALIGNMENT					
12	Connect to FM 300Ω antenna terminal through 300Ω FM dummy antenna.	100.10MHz (1kHz 30%, Pilot 10% modulation 60dB stereo signal)	100.10MHz	Connect AC VTVM to output terminal (L or R) through low pass filter (Refer to fig. 11)	VR302 (Separation Alignment)	1. Set the FM muting/mode switch to "on/auto", and then tuin in 100.10MHz. 2. Adjust VR302 so that R output is minimized when stereo modulator is in L (Lch. modulation) mode and that L output is minimized in R mode.

■ ANWEISUNGEN FÜR ABGLIEICHUNG ■■■■ DEUTSCH ■■■■

(Für Deutschland)

Anmerkungen:

1. Bereichsschalter..... { AM (MW Abgleich) / FM (UKW Abgleich)
2. FM Muting/Mode Schalter . . off/mono
3. Netzspannung auf ihren Sollwert halten.
4. UKW-Kunstantenne, 300 ohm. . . Vgl Abb. 1.
5. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.
6. Nittels eines Schraubenziehers die Stellung der Antennenspule (L201) so einstellen, daß, sie gegen die Rückenplatte einen Winkel von ca. 25° macht.

	MW/UKW MESSENDER		FREQUENZ STELLUNG DES TUNER	ANZEIGEGEIRÄT (Röhrenvoltmeter oder Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHS-PUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	MW-ABGLEICH					
1	Hohe Seite zur Klemme TP4 Kaltes Ende an Masse	450kHz (400Hz Modulat., 30%)	Kein Empfang	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang. "OUTPUT" schließen	T201 (1. IFT) T202 (2. IFT)	Auf max. Ausgang abgleichen.
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	531 kHz (400Hz Modulat., 30%)	531 kHz	Elektronisches GS-Voltmeter an Klemmen TP201 anschließen.	L202 (Osc. Spule)	L202 auf 1.0 ±0,05V justieren.
3	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	612kHz (400Hz Modulat., 30%)	612kHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" scheißen.	L201 (Ant. Spule)	Auf max. Ausgang abgleichen. Den Ferritkern von L201 mit einem Schraubendreher justieren.
4	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1503kHz (400Hz Modulat., 30%)	1503kHz	Wechselstrom Röhrenvoltmeter oder Oszillograph über den Ausgang "OUTPUT" scheißen.	CT201 (Ant. Trimmer)	Auf max. Ausgang abgleichen. Schritt (3) und (4) sing zu wiederholen.
	UKW-ZF-ABGLEICH					
5		Kein Signal	Kein Empfang	Elektronisches (GS-Voltmeter an Klemmen TP103 und TP105 anschließen. (Vgl Abb. 2)	T101 (Diskriminator IFT) A	1. FM muting/mode-Schalter auf "on/auto". 2. Den Kern von T101(A) so justieren, daß die gemessene Spannung im signallosen Modus 0V im 300mV Bereich beträgt.
	UKW-HF-ABGLEICH					
6		Kein Signal	87.50MHz	Elektronisches GS-Voltmeter an Klemme TP1 anschließen.	L7 (OSC Spule)	L7 (OSC-Spule) auf 3,0V justieren.

	MW/UKW MESSENDER ANSCHLUSS	MW/UKW MESSENDER FREQUENZ	FREQUENZ STELLUNG DES TUNER	ANZEIGEGEIRÄT (Röhrenvoltmeter oder Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHS-PUNKTE	BEMERKUNGEN
7	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen	90.10MHz (400Hz Modulat., 100%)	90.10MHz	Oszillograph über den Ausgang "OUTPUT" schließen.	L3 (1. Det. Spule) L5 (2. Det. Spule) L1 (Ant. Spule) T1 (UKW IFT)	1. Einen schwachen Eingang geben, bei den Geräusch in der Ausgangswellenform enthalten wird. 2. So einstellen, daß die Ausgangswellenform vertikal symmetrisch wird. (Abb 3) 3. Die Einstellung von (7) und (8) wiederhoten, bis die Frequenz mit der Skala übereinstimmt.
8	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106.10MHz (400Hz Modulat., 100%	106.10MHz	Oszillograph über den Ausgang "OUTPUT" schließen.	CT1 (Osc. Trimmer)	
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen	100.10MHz (400Hz Modulat., 100% 60dB)	100.10MHz	Klirrfaktor-Meßbrücke über den Ausgang "OUTPUT" schließen.	T102 (Diskriminator FT) B	1. FM muting/mode-Schalter auf "on/auto" stellen dann in signalloser Mode den Schritt (5) feststellen. 2. Wenn Abweichung vorliegt. A (primäre Seite) von T101 wieder einstellen. 3. T102 (B) Kern für minimale Verzerrung der rechten und linken Kanäle justieren.
	UKW-MUTING-ABGLEICH					
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16 dB (6.3 V) einstellen.	100.10MHz (400Hz Modulat., 100%)	100.10MHz		VR401 (UKW-Muting)	1. Den muting/FM mode Schalter auf "OFF/MONO", und auf 100.10MHz abstimmen. 2. Muting/FM mode Schalter auf "ON/AUTO" stellen, VR401 so einstellen, daß der Ausgang unter Bewirken der Dämpfung gegeben wird.
	UKW-STEREO-DEKODER-ABGLEICH					
	Unter Verwendung eines Zählers			Alternativ-Meßmethode		
11	1. Unmoduliertes Mono-Signal 100.10MHz in das Gerät speisen. 2. FM muting/mode-Schalter auf "on/auto" stellen. 3. Zähler über einen Widerstand 100KΩ an **TP301** schließen. 4. **VR301** auf 19kHz ±30Hz einstellen.			1. Stereosignal entweder von einem Stereogenerator. oder einem Sender einspeisen. 2. **VR301** so einstellen, bis die Stereolampe auf leuchtet. Schleifer von **VR301** sichern, wie in Abb. 4 gezeigt.		
	KANALTRENNUNG-ABGLEICH					
12	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100.10MHz Das Gerät auf 100MHz, 1kHz 30%, Pilot 10% Modulation 60dB Stereosignal einstellen.	100.10MHz	Wechselstrom-Röhrenvoltmeter oder Oszillograph durch Tiefpaß filter (fc=15 ~ 19kHz) an Ausgangsanschlüsse des Gerötes anschließen (Vgl Abb. 5)	VR302 (Kanaltrennung-Abgleich)	1. FM-Muting/mode Schalter auf "ON/AUTO stellen und abstimmen. 2. VR302 auf minimale Anzeige des R-Ausgangs bei Stereo-modulator in L-(L-Kanalmodulation) Modus, und auf minimale Anzeige des L-Ausgangs in R-Modus abgleichen.

■ INSTRUCTIONS D'ALIGNEMENT ■ FRANÇAIS ■

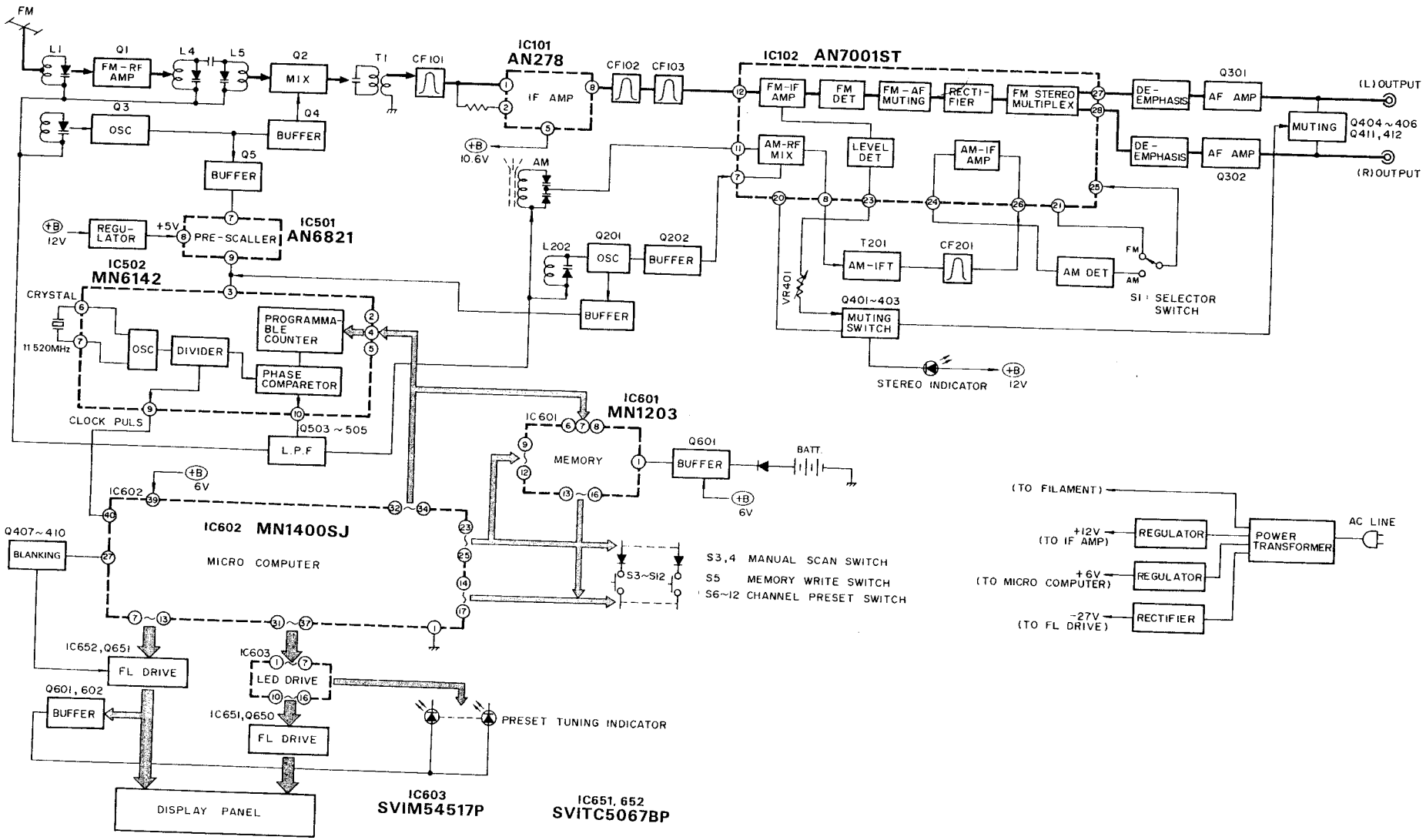
Notes:

1. Sèlecteur de gamme. . . . . { AM (Alignement AM) / FM (Alignement FM)
2. Commutateur de silencieux/mode. . . . . off/mono
3. Conservel la tension du secteur à la tension nominale.
4. Antenne fictive FM 300Ω . . . . . Voir fig. 7.
5. Le signal du générateur ne doit pas être plus élevé qu'il n'est nécessaire à obtenir une lecture en sortie.
6. Régler la position de la bobine (L201) de l'antenne en utilisant un tournevis de telle sorte qu'alle soit environ à 25 degrés de la plaque arriére.

	AM/FM GENERATEUR BRANCHEMENT	AM/FM GENERATEUR FREQUENCE	AIGUILLE SUR LE FREQUENCE	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	ALIGNEMENT AM					
1	Côté supérieur à la borne TP4. Commun an shâssis	450kHz (modulè à 30% par 400Hz)	Point sans signal	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	T201 (1 transfo FI) T202 (2 transfor FI)	Réglez au maximum de signal de sortie.
2	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	531kHz (modulé à 30% par 400Hz)	531kHz	Brancher le voltmétre électronique á C.C. aux bornes TP201.	L202 (bobine OSC)	Régler la L202 à 1.0 ±0.05V.

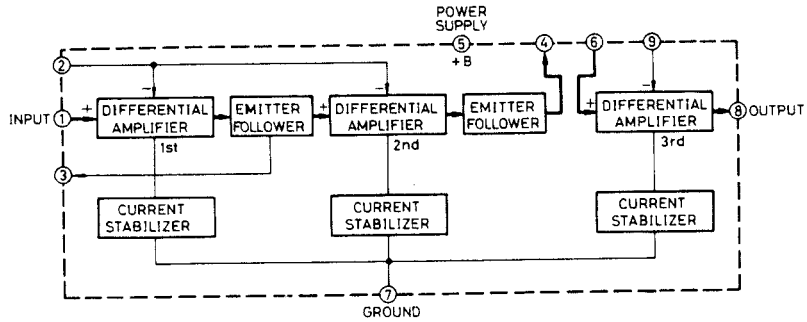
3	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner	612kHz (modulè à 30% per 400Hz)	612kHz	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	L201 (bobine ANT)	Réglez au maximum de signal de sortie. Régler le noyau ferrite de L201 à l'aide d'un tournevis.
4	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner	1503kHz (modulé à 30% per 400Hz)	1503kHz	C.A. voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	CT201 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (2) et (3).
	ALIGNEMENT FI-FM					
5		Sans signal	Point sans signal	Brancher le voltmètre électronique à C.C. aux bornes TP103 et TP105.	T101 (transfo FI discri) A	1. Commutateur de silencieux sur "on/auto". 2. Régler le noyau T101 (A) de telle sorte que le voltage mesuré dans le mode sans signal, soti de 0V dans la gamme des 300mV.
	ALIGNEMENT RF-FM					
6		Sans signal	87.50MHz	Brancher le voltmètre électronique à C.C. à la borne TP1.	L7 (bobine OSC)	Régler la L7 (Bobine d'oscillation) à 3,0V.
7	Branchez sur la prise d'antenne FM à traves une antenne fictive FM	90.10MHz (modulé à 100% par 400Hz)	90.10MHz	Oscilloscope sur prise de sortie du tuner	L3 (1er détecteur) L5 (2e détecteur) L1 (bobine ANT) T1 (FM IFT)	1. Appliquer une entrée faible de telle sorte que le parasite soit compris dans la forme de l'onde de sortie. 2. Faire le réglage de telle sorte que la forme de l'onde de sortie soit verticalement symétrique. (Voir fig. 9) 3. Refaire les réglages (7) et (8) jusqu'à ce que la fréquence corresponde correctement avec l'échells du cadran.
8	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106.10MHz (modulé à 100% par 400Hz)	106.10MHz	Oscilloscope sur prise de sortie du tuner.	CT1 (trimmer OSC)	
	REGLAGE DE LA DISTORSION FM EN MONO					
9	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	100.10MHz (modulé à 100% par 400Hz, 60dB)	106.10MHz	Distorsiomètre sur prise de sortie du tuner	T102 (Transfo FI discri.) B	1. Placer la commutateur Sourdine FM/Mode sur "on/auto" et vérifier l'étape 4 dans un mode sans signal. 2. S'il est déplacé, re-régler A (côté primaire) de T101. 3. Régler le noyou T102 (B) de telle sorte que la distorsion des canaux droit et gauche soit la plus faible.
10	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 16dB (6.3 V).	100.10MHz (modulé à 100% par 400Hz)	100.10MHz		VR401	1. Régler le commutateur de mode/réglage silencieux FM sur la position "OFF/MODE" et accorder sur 100.10MHz. 2. Avec le commutateur de mode/réglage silencieux FM réglé sur la position "ON/AUTO", régler le VR401 de telle sorte que la sortie fournie avec le réglage silencieux en position déclenchée.
	ALIGNEMENT DU PILOTE MULTIPLEX FM					
11	Avec un fréquencemétre 1. Signal mono 100.10MHz non modulé appliqué à l'appariel. 2. Commutateur de silencieux sur "on/auto". 3. Branchez le fréquencemètre sur **TP301** à travers une résistance de 100kΩ . 4. Régler **VR301** sur 19kHz ±30Hz.			Par un outre système 1. Appliquez à l'appareil un sinal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Régler **VR301** jusqu à ce que l'indicateur de stéréophonic s'allume. Collez le curseur de **VR301** comme indiqué sur la fig. 10.		
	AM/FM GENERATEUR BRANCHEMENT / FREQUENCE		AIGUILLE SUR LE FREQUENCE	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	REGLAGE DE LA SEPARATION DES CANAUX					
12	Branchez sur la prise d'antenne FM à traves une antenne fictive FM	100.10MHz Ajouter 100MHz, 1kHz, Modulation, pilote 10%, signal stéréophonique 60dB, à lápparell.	100.10MHz	Brancher un voltmètre électronique C.A. ou un oscilloscope aux bornes de sortie, par l'intermédiaire du filtre passe-bas (fc= 15 ~ 19kHz). (Voir fig. 11)	VR302	1. Placer le commutateur de mode/réglage silencieux FM sur "ON/FM AUTO" et accorder sur 100.10MHz 2. Régler VR302 de telle sorte que la sortie droite soit minimale quand la commande d'accord stéréophonique est dans le mode gauche (modulation du canal gauche) et que la sortie gauche soit minimale dan mode droit.

■ BLOCK DIAGRAM

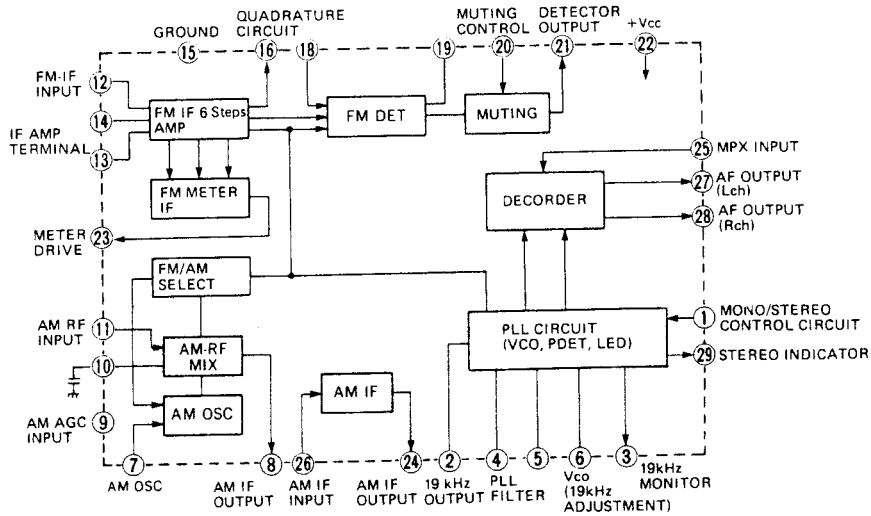


■ BLOCK DIAGRAM OF IC

- This is the basic block diagram of the inside circuit of IC. In an actual circuit, there may be sometimes idle terminals or some different functions other than the basic circuit.

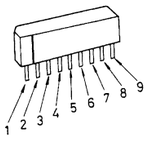
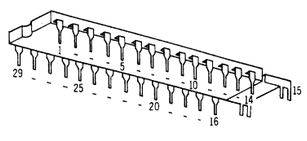


IC101 (AN278) FM IF Amplifier



IC102 (AN7001ST) AM Converter, FM IF Amplifier, FM Detector & Stereo Decoder (MPX)

■ TERMINAL GUIDE OF TRANSISTORS & IC

AN278	AN7001ST
	
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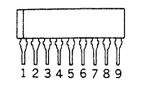
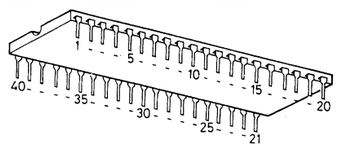
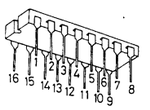
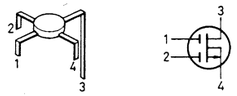
	
MN6142, MN1203 SVITC5067BP	3SK74
	
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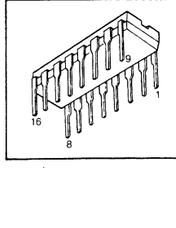	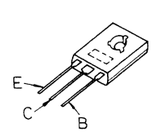

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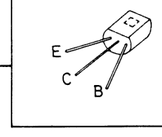
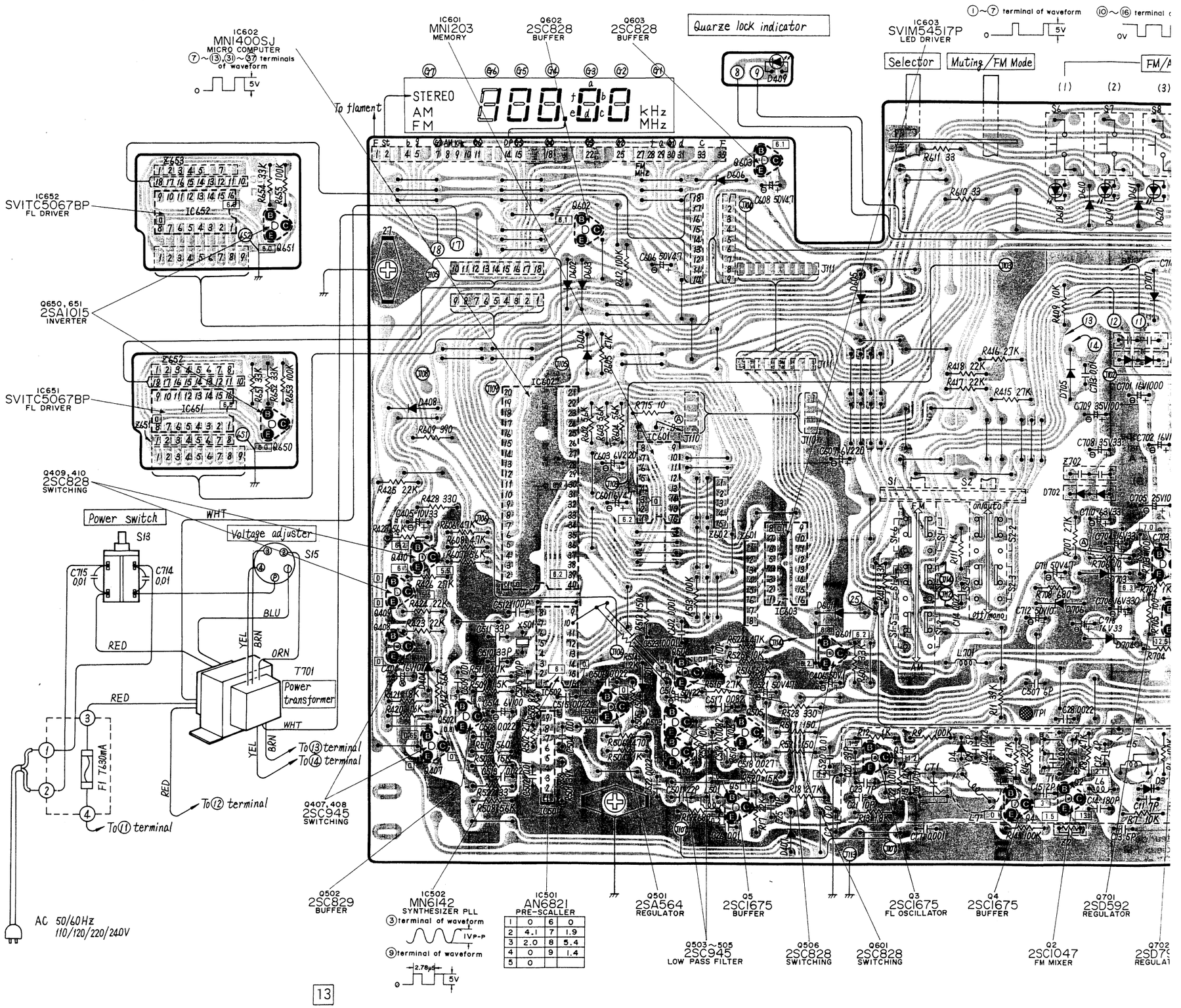
2SA564, 2SC828
2SC829, 2SC945
2SC1684, 2SD592
2SA1015

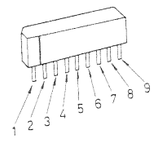
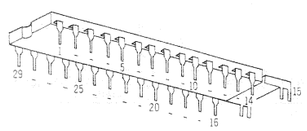
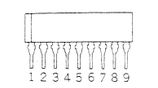
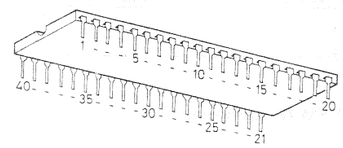
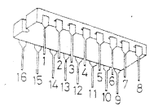
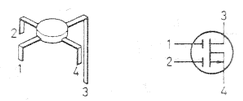


■ PRINTED CIRCUIT BOARD WIRING VIEW



1	0	6	0
2	4.1	7	1.9
3	2.0	8	5.4
4	0	9	1.4
5	0		

■ TERMINAL GUIDE OF TRANSISTORS & IC

AN278	AN7001ST
	
AN6821	**MN1400SJ**
	
MN6142 , MN1203 SVITC5067BP	**3SK74**
	

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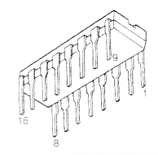
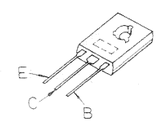
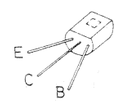
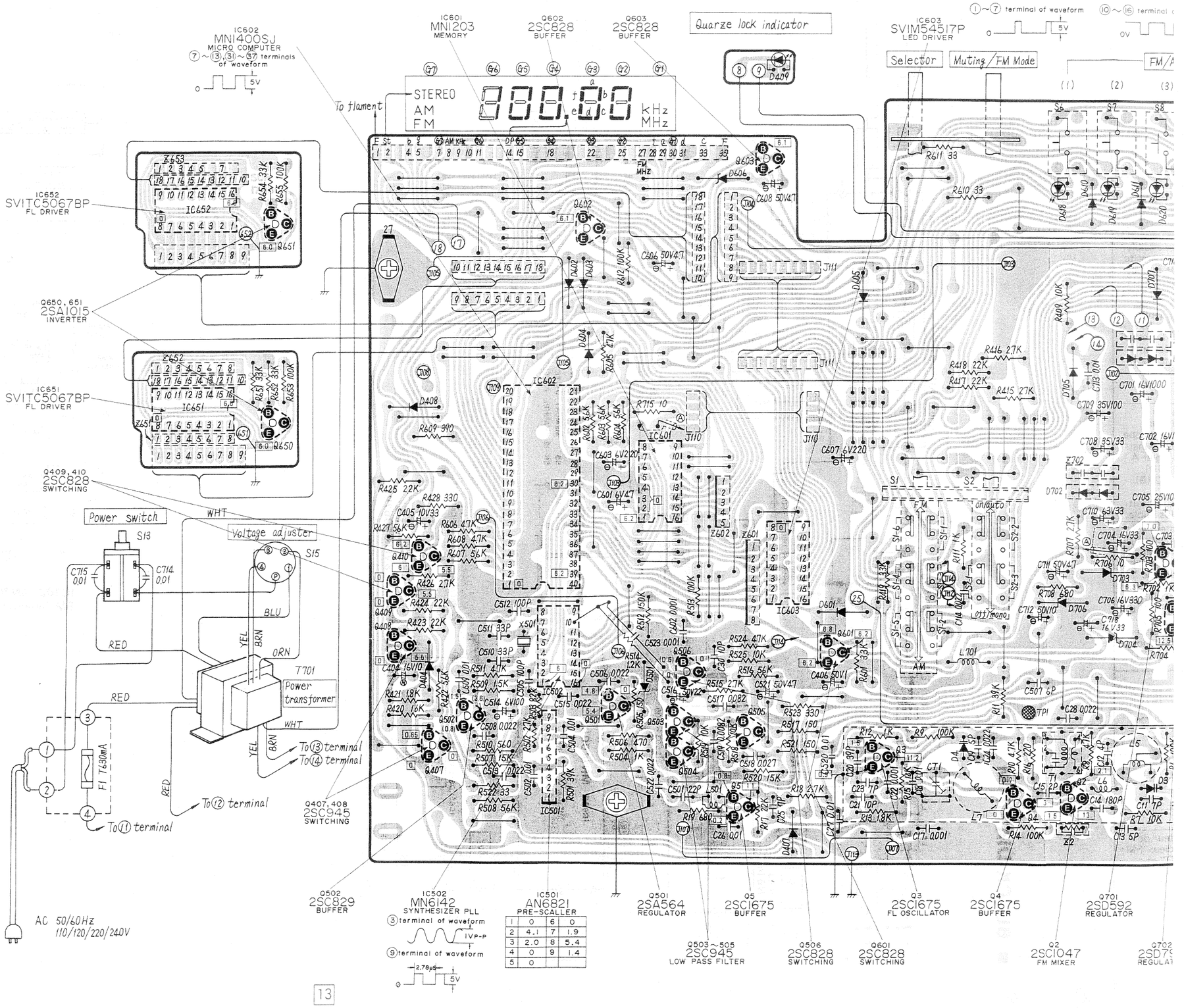
		

■ PRINTED CIRCUIT BOARD WIRING VIEW



ARD WIRING VIEW

Ground (Earth) Line

IC601 MN1203 MEMORY
Q602 2SC828 BUFFER
Q603 2SC828 BUFFER
Quarze lock indicator
IC603 SVIM5451?P LED DRIVER
①~⑦ terminal of waveform
⑩~⑯ terminal of waveform
Q303 2SC828 SWITCHING
Q703,704 2SC828 POWER MUTING
Q413 2SC828 MUTING SWITCH
Q404 2SA564 MUTING SWITCH
Selector
Muting/FM Mode
FM/AM preset tuning
Memory
Tuning
(down)
(up)
To filament
STEREO
AM
FM
kHz
MHz

IC102 AN7001ST
CONVERTER FM IF AMP
DETECTOR & STEREO DECODER(MPX)

	FM	AM		FM	AM
1	11.2	11.2	16	6.0	6.0
2	4.0	4.0	17	6.0	6.0
3	5.0	5.5	18	6.0	6.0
4	2.4	2.0	19	5.4	6.0
5	2.5	0.7	20	0.5	0.5
6	5.4	3.2	21	5.9	5.6
7	0.5	11.7	22	11.8	11.8
8	2.3	11.2	23	2.0	0
9	5.6	6.0	24	0.3	10.7
10	3.2	6.4	25	7.0	7.0
11	0	1.1	26	2.3	2.3
12	4.0	3.8	27	3.8	3.8
13	4.0	0	28	3.8	3.8
14	4.0	3.8	29	0	0
15	0	0			

Q202 2SC829 BUFFER
Q401~403 2SC828 MUTING SWITCH
Q411,412 2SC828 MUTING SWITCH
Q201 2SC829 AM OSCILLATOR
Q301,302 2SC1684 AF AMPLIFIER
Q405,406 2SC828 MUTING SWITCH
Battery
(1.5V)
Q407,408 2SC945 SWITCHING
Q502 2SC829 BUFFER
IC502 MN6142 SYNTHESIZER PLL
IC501 AN6821 PRE-SCALLER

1	0	6	0
2	4.1	7	1.9
3	2.0	8	5.4
4	0	9	1.4
5	0		

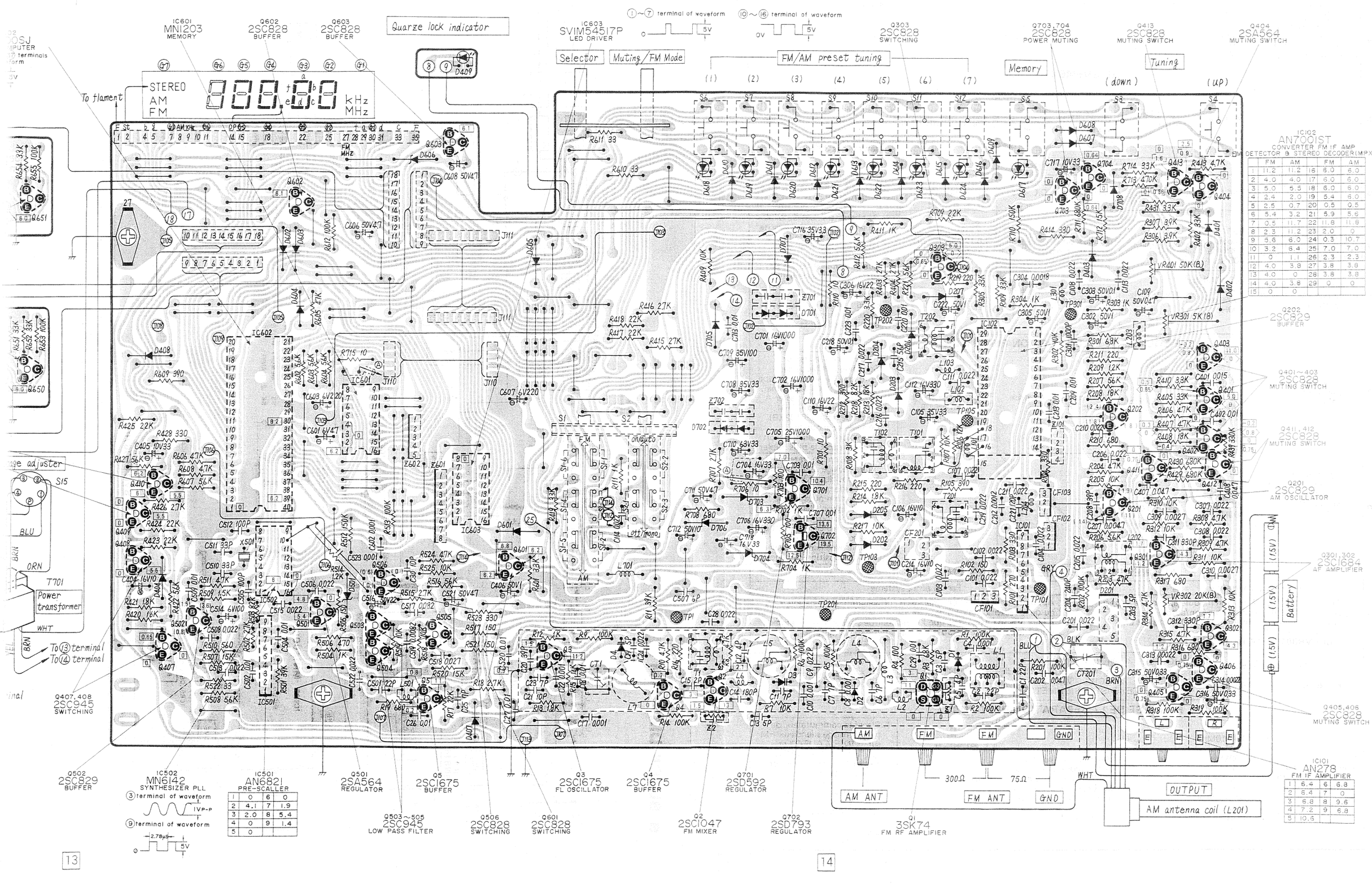
③terminal of waveform
1VP-P
⑨terminal of waveform
2.78μs
5V
Q501 2SA564 REGULATOR
Q5 2SC1675 BUFFER
Q503~505 2SC945 LOW PASS FILTER
Q506 2SC828 SWITCHING
Q601 2SC828 SWITCHING
Q3 2SC1675 FL OSCILLATOR
Q4 2SC1675 BUFFER
Q2 2SC1047 FM MIXER
Q701 2SD592 REGULATOR
Q702 2SD793 REGULATOR
Q1 3SK74 FM RF AMPLIFIER
AM ANT
FM ANT
GND
300Ω
75Ω
WHT
OUTPUT
AM antenna coil (L201)
IC101 AN278 FM IF AMPLIFIER

1	6.4	6	6.8
2	6.4	7	0
3	6.8	8	9.6
4	7.2	9	6.8
5	10.6		

To ③ terminal
To ④ terminal
T701 Power transformer
BLU
ORN
BRN
WHT
S15
ge adjuster

ARD WIRING VIEW

Ground (Earth) Line



	FM	AM		FM	AM
1	11.2	11.2	16	6.0	6.0
2	4.0	4.0	17	6.0	6.0
3	5.0	5.5	18	6.0	6.0
4	2.4	2.0	19	5.4	6.0
5	2.5	0.7	20	0.5	0.5
6	5.4	3.2	21	5.9	5.6
7	0.5	11.7	22	11.8	11.8
8	2.3	11.2	23	2.0	0
9	5.6	6.0	24	0.3	10.7
10	3.2	6.4	25	7.0	7.0
11	0	1.1	26	2.3	2.3
12	4.0	3.8	27	3.8	3.8
13	4.0	0	28	3.8	3.8
14	4.0	3.8	29	0	0
15	0	0			

1	0	6	0
2	4.1	7	1.9
3	2.0	8	5.4
4	0	9	1.4
5	0		

1	6.4	6	6.8
2	6.4	7	0
3	6.8	8	9.6
4	7.2	9	6.8
5	10.6		

■ REPLACEMENT PARTS LIST (Electric Parts)

NOTES: 1. Part numbers are indicated on most mechanical parts
Please use this part number for parts orders
2. ⚠ indicates that only parts specified by the manufacturer be used for safety.
3. (E) and (EG) are available in Scandinavia and European only.
(XA) is available in Asia, Latin America, Middle East and Africa only.
(EB) is available in Belgium only.
(XE) is available in United Kingdom only.
(XGH) is available in Holland only.
(XGF) is available in France only.

Ref. No.		Part No.	Part Name & Description
INTEGRATED CIRCUITS			
IC101		AN278	IC, FM IF Amplifier
IC102		AN7001ST	IC, AM Converter, FM IF Amplifier, FM Detector & Stereo Decoder (MPX)
IC501		AN6821	IC, Pre Scaller
IC502		MN6142	IC, Synthesizer PLL
IC601		MN1203	IC, Memory
IC602		MN1400SJ	IC, Micro Computer
IC603		SVIM54517P	IC, LED Driver
IC651, 652		SVITC5067BP	IC, FL Driver
TRANSISTORS			
Q1		3SK74-L1	Transistor, FM RF Amplifier
Q2		2SC1047-D	Transistor, FM Mixer
Q3, 4, 5		2SC1675-L1	Transistor, FM Oscillator & Buffer (Use in ranks L1 or L2)
Q201, 202, 502		**2SC829-C**	Transistor, AM Oscillator & Buffer
Q301, 302		2SC1684-F	Transistor, AF Amplifier (Use in ranks S or T)
Q303, 410, 506, 601, 602, 603, 703, 704		**2S1328-T**	Transistor, Inverter, Blanking Circuit, Switching, Buffer & Power Muting
Q401, 402, 403, 405, 406, 409, 411, 412, 413		**2SC1328-T**	Transistor, Muting & Blanking Circuit
Q404, 501		**2SA666AI-R**	Transistor, Muting Switch & Regulator
Q407, 408, 503, 504, 505		2SC945-P2	Transistor, Blanking Circuit & Low Pass filter (Use in ranks P1 or P2)
Q650, 651		2SA1015-Y	Transistor, Inverter (Use in ranks Y or O)
Q701		2SD592ANC-Q	Transistor, Regulator (Use in ranks Q or R)
Q702		2SD793-Q	Transistor, Regulator (Use in ranks P or Q)
DIODES			
D1, 2, 3, 4		**MA320G1-N**	Diode, Variable Capacitor (FM)
D201		SVDBB113	Diode, Variable Capacitor (AM)
D202, 203, 204, 205, 207, 401, 403, 407, 604, 607, 608, 609~616, 708		**MA162A**	Diode, Switching & AGC
D206, 402, 404		**2-0A99**	Diode, AM Detector & Bias Supply
D408, 601, 603, 605, 707		**MA162A**	Diode
D409		LN220RP	Diode, Light Emitting Diode
D501		SVDMZ305AM	Diode, 5V Zener
D602		**MA162A**	Diode, Except Product for [XA]
D606		SVDMZ307A	Diode, 7V Zener
D617, 618~624		LN831RP	Diode, Light Emitting Diode
D626 [XA] only		**MA162A**	Diode
D701, 702	⚠	**RVD10DC4**	Diode, Rectifier
D703		SVDMZ307A	Diode, 7V Zener
D704		**SVDEQA0113RA**	Diode, 13V Zener
D705	⚠	**SVDSR1K2**	Diode, Rectifier
D706		SVDMZ336B	Diode, 36V Zener

Ref. No.		Part No.	Part Name & Description
COILS and TRANSFORMERS			
L1		SLA4N17	Coil, FM Antenna
L2, 501		**RLQY25S2**	Coil, Choke
L3		**SLQAN40G-1**	Coil, Choke
L4		SLD4P35-P	Coil, FM RF Detector (1st)
L5		SLD4P37-P	Coil, FM RF Detector (2nd)
L6		**ELQ5A77**	Coil, Choke
L7		SLO4P67-P	Coil, FM Local Oscillator
L101		SLQX180-2	Coil, Choke
L102, 203, 204		SLQX101-3M	Coil, Choke
L103		RLQY15G5-Y	Coil, Choke
L201		SLF2D51	Coil, AM Ferrite Core Antenna
L202		SLO2C13-P	Coil, AM Local Oscillator
L301		SLQX393-1Z	Coil, Choke
L701		SLQX101-2D	Coil, Choke
T1		SLI4C109	Transformer, FM IF
T101		SLI4C515-1	Transformer, FM IF
T102		SLI4C517-1	Transformer, Discriminator
T201		SLI2C127	Transformer, AM IF
T202		SLI2C413	Transformer, AM IF
T701	⚠	SLT5J113-W	Transformer, Power Source
CERAMIC FILTERS			
CF101, 102, 103		SVFE107MM-A	Ceramic Filter, 10.7MHz (Red)
CF201		SVFSP450H1	Ceramic Filter, AM 450kHz
VARIABLE RESISTORS			
VR301		EVTS3MA00B53	PLL MPX VCO Adjustment, 5kΩ (B)
VR302		**EVLS3AA00B24**	Separation Adjustment, 20kΩ (B)
VR401		**EVLS3AA00B54**	FM Muting Level Adjustment, 50kΩ (B)
FUSE			
F1	⚠	XBA2C061R0	Fuse, 1630mA (250V)
CRYSTAL			
X501		SVQ43U11521	Crystal, 11.520MHz
COMPONENT COMBINATIONS			
Z1		EXRP102Z223C	Component Combination, 22kΩ & 0.01μF
Z2		EXRP103P102C	Component Combination, 1kΩ & 0.01μF
Z101		EXF3S104C	Component Combination, 0.01μF (X3)
Z601		EXBP8756ZK	Component Combination, 5.6kΩ (X7)
Z602		EXBP84473K	Component Combination, 47kΩ (X4)
Z651, 652, 653		EXBP8?104K	Component Combination, 100kΩ (X7)
Z701, 702		EXRH5203ZS	Component Combination, 0.01μF (X2)
VARIABLE CAPACITORS			
CT1		ECV1ZW06X32E	Trimmer, Local Oscillator
CT201		SVC1V121B269	Trimmer, AM Antenna
SWITCHES			
S1, 2		SSH267	Switch, Selector & FM Muting Mode
S3~12		SSG1	Switch, Manual Scan, Memory Write & Channel Preset
S13	⚠	SSH119	Switch, Power
S14 [XA] only		ESD1411b	Switch, FM/AM Allocation
S15	⚠	ESE372	Switch, Voltage Adjuster
DISPLAY PANEL			
FL		SAD7M109ZA	Display Panel, Indication

Ref. No.		Part No.	Part Name & Description			
RESISTORS						
R1, 2		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R3		**ERD25TJ683**	Carbon,	68kΩ,	1/4W,	±5%
R4		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	±5%
R5, 6		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R7		**ERD25FJ103**	Carbon,	10kΩ	1/4W,	±5%
R8		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	±5%
R9		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R10		**ERD25FJ472**	Carbon,	4.7kΩ	1/4W,	±5%
R11		**ERD25TJ393**	Carbon,	39kΩ,	1/4W,	±5%
R12		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R13		**ERD25FJ182**	Carbon,	1.8kΩ,	1/4W,	±5%
R14		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R15		**ERD25TJ183**	Carbon,	18kΩ,	1/4W,	±5%
R16		**ERD25FJ221**	Carbon,	220Ω,	1/4W,	±5%
R17		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	±5%
R18		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R19		**ERD25FJ681**	Carbon,	680Ω,	1/4W,	±5%
R101		**ERD25FJ271**	Carbon,	270Ω,	1/4W,	±5%
R102		**ERD25FJ151**	Carbon,	150Ω,	1/4W,	±5%
R103, 104		**ERD25FJ331**	Carbon,	330Ω,	1/4W,	±5%
R105		**ERD25FJ391**	Carbon,	390Ω,	1/4W,	±5%
R106		**ERD25TJ123**	Carbon,	12kΩ,	1/4W,	±5%
R107		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R108		ERQ25CKF4001	Metal Film,	3kΩ,	1/4W,	±1%
R109		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R110		**ERD25FJ100**	Carbon,	10Ω,	1/4W,	±5%
R111		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R201, 202		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R203, 204		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	±5%
R205		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R206		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R207		**ERD25TJ563**	Carbon,	56kΩ,	1/4W,	±5%
R208		**ERD25TJ183**	Carbon,	18kΩ,	1/4W,	±5%
R209		**ERD25FJ122**	Carbon,	1.2kΩ,	1/4W,	±5%
R210		**ERD25FJ681**	Carbon,	680Ω,	1/4W,	±5%
R211		**ERD25FJ221**	Carbon,	220Ω,	1/4W,	±5%
R212		**ERD25FJ391**	Carbon,	390Ω,	1/4W,	±5%
R213		**ERD25TJ183**	Carbon,	18kΩ,	1/4W,	±5%
R214		**ERD25FJ182**	Carbon,	1.8kΩ,	1/4W,	±5%
R215, 216		**ERD25FJ221**	Carbon,	220Ω,	1/4W,	±5%
R217		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R218		**ERD25FJ822**	Carbon,	8.2kΩ,	1/4W,	±5%
R219		**ERD25FJ221**	Carbon,	220Ω,	1/4W,	±5%
R220		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R221		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R301		**ERD25FJ682**	Carbon,	6.8kΩ,	1/4W,	±5%
R302		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R303, 304		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R305		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	±5%
R306, 307		**ERD25FJ392**	Carbon,	3.9kΩ,	1/4W,	±5%
R308, 309		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R310, 311		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R312, 313		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R314, 315		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R316, 317		**ERD25FJ681**	Carbon,	680Ω,	1/4W,	±5%
R318, 319		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R320		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	±5%
R321, 322		**ERD25TJ273**	Carbon,	27kΩ,	1/4W,	±5%
R323		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	±5%
R406, 407		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	±5%
R408		**ERD25TJ183**	Carbon,	18kΩ,	1/4W,	±5%
R409		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R410		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R411		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R412		**ERD25TJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R413		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R414		**ERD25TJ331**	Carbon,	330Ω,	1/4W,	±5%
R415		**ERD25TJ273**	Carbon,	27kΩ,	1/4W,	±5%
R416		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R417, 418		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	±5%
R419		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R420		ERQ25CKF1602	Metal Film,	16kΩ,	1/4W,	±1%
R421		**ERD25FJ182**	Carbon,	1.8kΩ,	1/4W,	±5%
R422		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R423, 424		**ERD25TJ223**	Carbon,	22kΩ,	1/4W,	±5%
R425		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W,	±5%
R426		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R427		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R428		**ERD25TJ331**	Carbon,	330Ω,	1/4W,	±5%
R429, 430		**ERD25TJ684**	Carbon,	680kΩ,	1/4W,	±5%
R431		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R439		**ERD25TJ334**	Carbon,	330kΩ,	1/4W,	±5%
R501		**ERD25TJ393**	Carbon,	39kΩ,	1/4W,	±5%
R502		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R503		**ERD25FJ822**	Carbon,	8.2kΩ,	1/4W,	±5%
R504		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R505		**ERD25FJ151**	Carbon,	150Ω,	1/4W,	±5%
R506		**ERD25FJ471**	Carbon,	470Ω,	1/4W,	±5%
R507		**ERD25TJ153**	Carbon,	15kΩ,	1/4W,	±5%
R508		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R509		**ERD25FJ152**	Carbon,	1.5kΩ,	1/4W,	±5%
R510		**ERD25FJ561**	Carbon,	560Ω,	1/4W,	±5%
R511		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R512		**ERD25TJ154**	Carbon,	150kΩ,	1/4W,	±5%
R513		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R514		**ERD25FJ122**	Carbon,	1.2kΩ,	1/4W,	±5%
R515		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R516		**ERD25TJ563**	Carbon,	56kΩ,	1/4W,	±5%
R517		**ERD25FJ151**	Carbon,	150Ω,	1/4W,	±5%
R518, 519		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R520		**ERD25TJ163**	Carbon,	16kΩ,	1/4W,	±5%
R521		**ERD25FJ151**	Carbon,	150Ω,	1/4W,	±5%
R522		**ERD25FJ330**	Carbon,	33Ω,	1/4W,	±5%
R523		**ERD25FJ331**	Carbon,	330Ω,	1/4W,	±5%
R524		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	±5%
R525		**ERD25FJ103**	Carbon,	10kΩ,	1/4W,	±5%
R601		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R602, 603		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R604		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R605		**ERD25TJ473**	Carbon,	47kΩ,	1/4W,	±5%
R606		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R607		**ERD25FJ562**	Carbon,	5.6kΩ,	1/4W,	±5%
R608		**ERD25FJ472**	Carbon,	4.7kΩ,	1/4W,	±5%
R609		**ERD25FJ391**	Carbon,	390Ω,	1/4W,	±5%
R610, 611		**ERD25FJ330**	Carbon,	33Ω,	1/4W,	±5%
R612		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R651, 652		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	±5%
R653		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R654		**ERD25TJ333**	Carbon,	33kΩ,	1/4W,	±5%
R655		**ERD25TJ104**	Carbon,	100kΩ,	1/4W,	±5%
R701	⚠	**ERD50TJ100**	Carbon,	10Ω,	1/2W,	±5%
R702		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R703		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	±5%
R704		**ERD25FJ102**	Carbon,	1kΩ,	1/4W,	±5%
R705		**ERD25FJ101**	Carbon,	100Ω,	1/4W,	±5%
R706		**ERD25FJ100**	Carbon,	10Ω,	1/4W,	±5%
R707		**ERD25FJ272**	Carbon,	2.7kΩ,	1/4W,	±5%
R708		**ERD25FJ681**	Carbon,	680Ω,	1/4W,	±5%
R709		**ERD25FJ222**	Carbon,	2.2kΩ,	1/4W,	±5%
R710		**ERD25TJ154**	Carbon,	150kΩ,	1/4W,	±5%
R711		**ERD25TJ684**	Carbon,	680kΩ,	1/4W,	±5%
R712		**ERD25TJ153**	Carbon,	15kΩ,	1/4W,	±5%
R713		**ERD25TJ474**	Carbon,	470kΩ,	1/4W,	±5%
R714		**ERD25FJ332**	Carbon,	3.3kΩ,	1/4W,	±5%
R715		**ERD25FJ100**	Carbon,	10Ω,	1/4W,	±5%

RESISTORS

Ref. No.	Part No.	Part Name & Description
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25TJ683	Carbon, 68kΩ, 1/4W, ±5%
	ERD25FJ101	Carbon, 100Ω, 1/4W, ±5%
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25TJ473	Carbon, 47kΩ, 1/4W, ±5%
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25FJ472	Carbon, 4.7kΩ, 1/4W, ±5%
	ERD25TJ393	Carbon, 39kΩ, 1/4W, ±5%
	ERD25FJ102	Carbon, 1kΩ, 1/4W, ±5%
	ERD25FJ182	Carbon, 1.8kΩ, 1/4W, ±5%
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25TJ183	Carbon, 18kΩ, 1/4W, ±5%
	ERD25FJ221	Carbon, 220Ω, 1/4W, ±5%
	ERD25TJ223	Carbon, 22kΩ, 1/4W, ±5%
	ERD25FJ272	Carbon, 2.7kΩ, 1/4W, ±5%
	ERD25FJ681	Carbon, 680Ω, 1/4W, ±5%
	ERD25FJ271	Carbon, 270Ω, 1/4W, ±5%
	ERD25FJ151	Carbon, 150Ω, 1/4W, ±5%
	ERD25FJ331	Carbon, 330Ω, 1/4W, ±5%
	ERD25FJ391	Carbon, 390Ω, 1/4W, ±5%
	ERD25TJ123	Carbon, 12kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERO25CKF3001	Metal Film, 3kΩ, 1/4W, ±1%
	ERD25FJ332	Carbon, 3.3kΩ, 1/4W, ±5%
	ERD25FJ100	Carbon, 10Ω, 1/4W, ±5%
	ERD25FJ102	Carbon, 1kΩ, 1/4W, ±5%
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25TJ473	Carbon, 47kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ562	Carbon, 5.6kΩ, 1/4W, ±5%
	ERD25TJ563	Carbon, 56kΩ, 1/4W, ±5%
	ERD25TJ183	Carbon, 18kΩ, 1/4W, ±5%
	ERD25FJ122	Carbon, 1.2kΩ, 1/4W, ±5%
	ERD25FJ681	Carbon, 680Ω, 1/4W, ±5%
	ERD25FJ221	Carbon, 220Ω, 1/4W, ±5%
	ERD25FJ391	Carbon, 390Ω, 1/4W, ±5%
	ERD25TJ183	Carbon, 18kΩ, 1/4W, ±5%
	ERD25FJ182	Carbon, 1.8kΩ, 1/4W, ±5%
	ERD25FJ221	Carbon, 220Ω, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ822	Carbon, 8.2kΩ, 1/4W, ±5%
	ERD25FJ221	Carbon, 220Ω, 1/4W, ±5%
	ERD25FJ332	Carbon, 3.3kΩ, 1/4W, ±5%
	ERD25FJ562	Carbon, 5.6kΩ, 1/4W, ±5%
	ERD25FJ682	Carbon, 6.8kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ102	Carbon, 1kΩ, 1/4W, ±5%
	ERD25TJ333	Carbon, 33kΩ, 1/4W, ±5%
	ERD25FJ392	Carbon, 3.9kΩ, 1/4W, ±5%
	ERD25FJ472	Carbon, 4.7kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ472	Carbon, 4.7kΩ, 1/4W, ±5%
	ERD25FJ681	Carbon, 680Ω, 1/4W, ±5%
	ERD25TJ104	Carbon, 100kΩ, 1/4W, ±5%
	ERD25TJ333	Carbon, 33kΩ, 1/4W, ±5%
	ERD25TJ273	Carbon, 27kΩ, 1/4W, ±5%
	ERD25TJ333	Carbon, 33kΩ, 1/4W, ±5%
	ERD25TJ473	Carbon, 47kΩ, 1/4W, ±5%
	ERD25TJ183	Carbon, 18kΩ, 1/4W, ±5%
	ERD25FJ103	Carbon, 10kΩ, 1/4W, ±5%
	ERD25FJ332	Carbon, 3.3kΩ, 1/4W, ±5%
	ERD25FJ102	Carbon, 1kΩ, 1/4W, ±5%
	ERD25TJ562	Carbon, 5.6kΩ, 1/4W, ±5%
	ERD25FJ472	Carbon, 4.7kΩ, 1/4W, ±5%
	ERD25TJ331	Carbon, 330Ω, 1/4W, ±5%

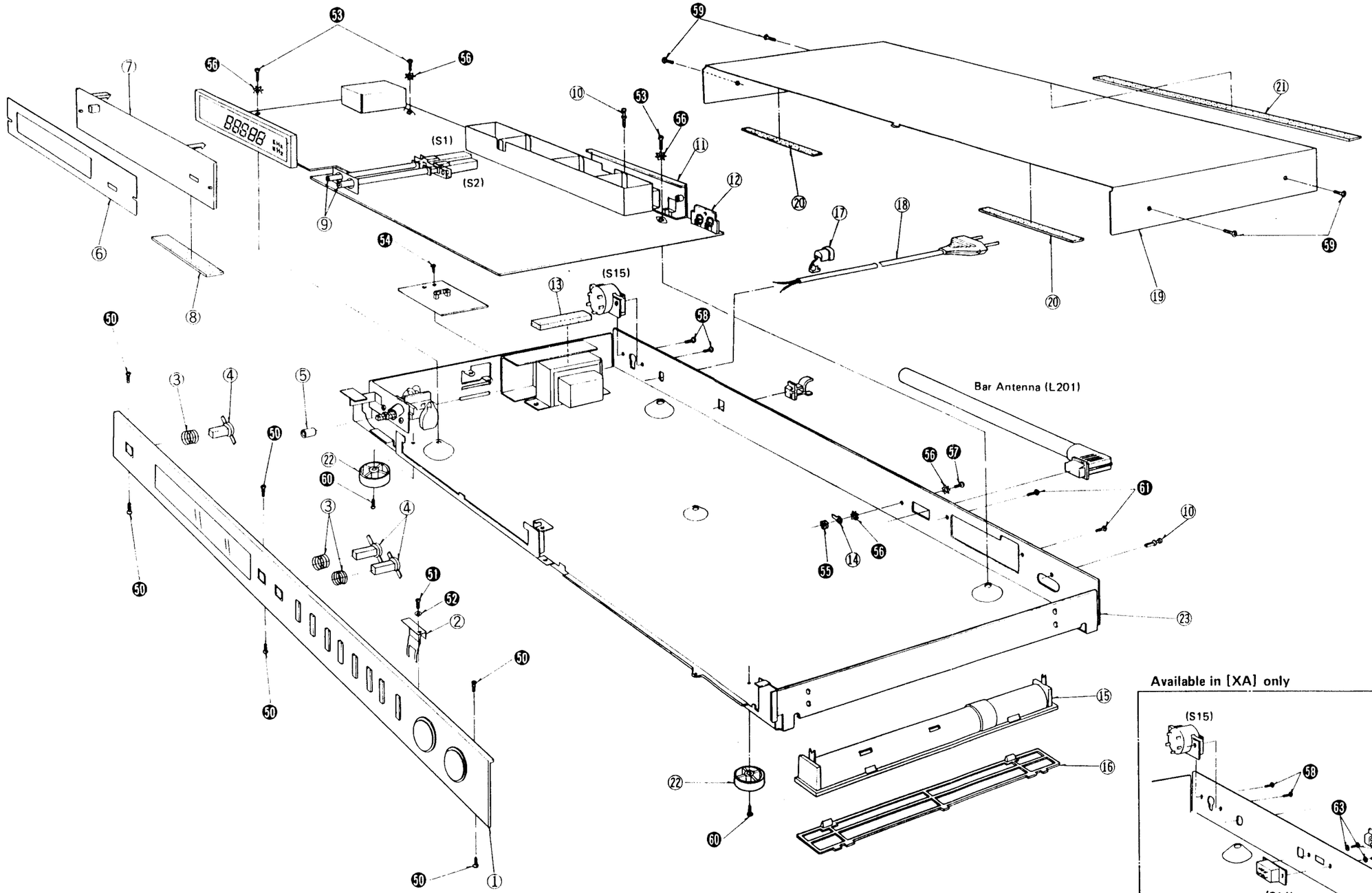
Ref. No.	Part No.	Part Name & Description
R415	**ERD25TJ273**	Carbon, 27kΩ, 1/4W, ±5%
R416	**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ±5%
R417, 418	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%
R419	**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ±5%
R420	ERO25CKF1602	Metal Film, 16kΩ, 1/4W, ±1%
R421	**ERD25FJ182**	Carbon, 1.8kΩ, 1/4W, ±5%
R422	**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R423, 424	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%
R425	**ERD25FJ222**	Carbon, 2.2kΩ, 1/4W, ±5%
R426	**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ±5%
R427	**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R428	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ±5%
R429, 430	**ERD25TJ684**	Carbon, 680kΩ, 1/4W, ±5%
R431	**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ±5%
R439	**ERD25TJ334**	Carbon, 330kΩ, 1/4W, ±5%
R501	**ERD25TJ393**	Carbon, 39kΩ, 1/4W, ±5%
R502	**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ±5%
R503	**ERD25FJ822**	Carbon, 8.2kΩ, 1/4W, ±5%
R504	**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ±5%
R505	**ERD25FJ151**	Carbon, 150Ω, 1/4W, ±5%
R506	**ERD25FJ471**	Carbon, 470Ω, 1/4W, ±5%
R507	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ±5%
R508	**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R509	**ERD25FJ152**	Carbon, 1.5kΩ, 1/4W, ±5%
R510	**ERD25FJ561**	Carbon, 560Ω, 1/4W, ±5%
R511	**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ±5%
R512	**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ±5%
R513	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%
R514	**ERD25FJ122**	Carbon, 1.2kΩ, 1/4W, ±5%
R515	**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ±5%
R516	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ±5%
R517	**ERD25FJ151**	Carbon, 150Ω, 1/4W, ±5%
R518, 519	**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ±5%
R520	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ±5%
R521	**ERD25FJ151**	Carbon, 150Ω, 1/4W, ±5%
R522	**ERD25FJ330**	Carbon, 33Ω, 1/4W, ±5%
R523	**ERD25FJ331**	Carbon, 330Ω, 1/4W, ±5%
R524	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%
R525	**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ±5%
R601	**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ±5%
R602, 603	**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R604	**ERD25TJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R605	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%
R606	**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ±5%
R607	**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ±5%
R608	**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ±5%
R609	**ERD25FJ391**	Carbon, 390Ω, 1/4W, ±5%
R610, 611	**ERD25FJ330**	Carbon, 33Ω, 1/4W, ±5%
R612	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%
R651, 652	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ±5%
R653	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%
R654	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ±5%
R655	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%
⚠ R701	**ERD50FJ100**	Carbon, 10Ω, 1/2W, ±5%
R702	**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ±5%
R703	**ERD25FJ101**	Carbon, 100Ω, 1/4W, ±5%
R704	**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ±5%
R705	**ERD25FJ101**	Carbon, 100Ω, 1/4W, ±5%
R706	**ERD25FJ100**	Carbon, 10Ω, 1/4W, ±5%
R707	**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ±5%
R708	**ERD25FJ681**	Carbon, 680Ω, 1/4W, ±5%
R709	**ERD25FJ22**	Carbon, 2.2kΩ, 1/4W, ±5%
R710	**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ±5%
R711	**ERD25TJ684**	Carbon, 680kΩ, 1/4W, ±5%
R712	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ±5%
R713	**ERD25TJ474**	Carbon, 470kΩ, 1/4W, ±5%
R714	**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ±5%
R715	**ERD25FJ100**	Carbon, 10Ω, 1/4W, ±5%

CAPACITORS

Ref. No.	Part No.	Part Name & Description
C1	ECCD1H220KC	Ceramic, 22pF, 50V, ±10%
C2	ECCD1H220KC	Ceramic, 22pF, 50V, ±10%
C3	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF
C4	ECKD1H102MD	Ceramic, 0.001μF, 50V, ±0.25pF
C5	ECCD1H040CC	Ceramic, 4pF, 50V, ±0.25pF
C6	ECCD1H070CC	Ceramic, 7pF, 50V, ±0.25pF
C7	ECCD1H070CC	Ceramic, 7pF, 50V, ±0.25pF
C8	ECKD1H102MD	Ceramic, 0.001μF, 50V, ±20%
C9	ECB1HR22K	Ceramic, 0.22μF, 50V, ±10%
C10	ECKD1H102MD	Ceramic, 0.001μF, 50V, ±20%
C11	ECCD1H070CC	Ceramic, 7pF, 50V, ±0.25pF
C12	ECCD1H040CC	Ceramic, 4pF, 50V, ±0.25pF
C13	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF
C14	ECCD1H181K	Ceramic, 180pF, 50V, ±10%
C15	ECCD1H020CC	Ceramic, 2pF, 50V, ±0.25pF
C17	ECKD1H102MD	Ceramic, 0.001μF, 50V, ±20%
C18	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%
C19	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF
C20	ECCD1H390KC	Ceramic, 39pF, 50V, ±10%
C21	ECCD1H100KC	Ceramic, 10pF, 50V, ±10%
C22	ECKD1H102ZF	Ceramic, 0.001μF, 50V, +80, -20%
C23	ECCD1H070DC	Ceramic, 7pF, 50V, ±0.5pF
C24	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C25	ECCD1H070CC	Ceramic, 7pF, 50V, ±0.25pF
C26	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C27	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C28	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C29	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C30	ECCD1H100KC	Ceramic, 10pF, 50V, ±10%
C101, 102	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C103, 104	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C105	**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C106	**ECEA1HS100**	Electrolytic, 10μF, 50V
C107, 108	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C109	**ECEA50ZR47**	Electrolytic, 0.47μF, 50V
C110	**ECEA1ES220**	Electrolytic, 22μF, 25V
C111	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C112	**ECEA1CS331**	Electrolytic, 330μF, 16V
C113, 114	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C201	ECQM1H223KZ	Polyester, 0.022μF, 50V, ±10%
C202	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%
C203	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF
C204	ECQS1241JZ	Polystyrene, 240pF, 125V, ±5%
C205, 206	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C207	ECQM1H472KZ	Polyester, 0.0047μF, 50V, ±10%
C208	ECCD1H390KC	Ceramic, 39pF, 50V, ±10%
C209	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C210	ECQM1H223KZ	Polyester, 0.022μF, 50V, ±10%
C211	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C212	ECQM1H122JZ	Polyester, 0.0012μF, 50V, ±5%
C213	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%
C214	ECEA1HS100	Electrolytic, 10μF, 50V
C215	ECCD1H560KC	Ceramic, 56pF, 50V, ±10%
C216, 217	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C218	ECEA50ZR1	Electrolytic, 0.1μF, 50V
C219	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C220	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%
C221	ECCD1H121K	Ceramic, 120pF, 50V, ±10%
C222	**ECEA50Z1**	Electrolytic, 1μF, 50V

Ref. No.	Part No.	Part Name & Description
C223	ECKD1H103KB	Ceramic, 0.01μF, 50V, ±20%
C301	ECQM1102JZ	Polystyrene, 0.001μF, 125V, ±5%
C302	**ECEA50Z1**	Electrolytic, 1μF, 50V
C303	ECE2A0JN1	Electrolytic, 0.1μF, 50V
C304	ECQM1H182JZ	Polyester, 0.0018μF, 50V, ±5%
C305	**ECEA50Z1**	Electrolytic, 1μF, 50V
C306	**ECEA1ES220**	Electrolytic, 22μF, 25V
C307, 308	ECQM1H223KZ	Polyester, 0.022μF, 50V, ±10%
C309, 310	ECQM1H272KZ	Polyester, 0.0027μF, 50V, ±10%
C311, 312	ECKD1H331KB	Ceramic, 330pF, 50V, ±10%
C313, 314	ECQM1H222KZ	Polyester, 0.0022μF, 50V, ±10%
C316, 316	ECEA6V3R3	Electrolytic, 0.33μF, 50V
C401	ECQM1H153KZ	Polyester, 0.015μF, 50V, ±10%
C402	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C404	⚠ **ECEA16N10**	Nonpolar Electrolytic, 10μF, 16V
C405	**ECEA1CS330**	Electrolytic, 33μF, 16V
C406	**ECEA50Z1**	Electrolytic, 1μF, 50V
C407, 408	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%
C501	ECCD1H220JC	Ceramic, 22pF, 50V, ±10%
C502	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C504	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C505	ECCD1H101J	Ceramic, 100pF, 50V, ±10%
C506	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C507	ECCD1H060CC	Ceramic, 6pF, 50V, ±0.25pF
C508	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C509	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C510, 511	ECCD1H330JC	Ceramic, 33pF, 50V, ±5%
C512	ECCD1H101K	Ceramic, 100pF, 50V, ±10%
C513	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C514	**ECEA1AS101**	Electrolytic, 100μF, 10V
C515	ECQM1H223JZ	Polyester, 0.022μF, 50V, ±5%
C516	**ECEA50M2R2R**	Electrolytic, 2.2μF, 50V
C517	ECQM1H823KZ	Polyester, 0.082μF, 50V, ±10%
C518	ECQM1H273KZ	Polyester, 0.027μF, 50V, ±10%
C519	ECQM1H682KZ	Polyester, 0.0082μF, 50V, ±10%
C520	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C521	**ECEA1HS470**	Electrolytic, 47μF, 50V
C522	ECKD1H223ZF	Ceramic, 0.022μF, 50V, +80, -20%
C523	ECKD1H102ZF	Ceramic, 0.001μF, 50V, +80, -20%
C601	**ECEA1AS470**	Electrolytic, 47μF, 10V
C602	ECKD1H102ZF	Ceramic, 0.001μF, 50V, +80, -20%
C603	**ECEA1AS221**	Electrolytic, 220μF, 6.3V
C606	**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C607	**ECEA1AS221**	Electrolytic, 220μF, 10V
C608	**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C701, 702	**ECEA1CS102**	Electrolytic, 1000μF, 16V
C703	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C704	**ECEA1CS330**	Electrolytic, 33μF, 16V
C705	**ECEA1VS102**	Electrolytic, 1000μF, 35V
C706	**ECEA1CS331**	Electrolytic, 330μF, 16V
C707	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C708	**ECEA1VS330**	Electrolytic, 33μF, 35V
C709	**ECEA1VS101**	Electrolytic, 100μF, 35V
C710	**ECEA1JS330**	Electrolytic, 33μF, 63V
C711	**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C712	**ECEA1HS100**	Electrolytic, 10μF, 50V
C713	ECKD1H103ZF	Ceramic, 0.01μF, 50V, +80, -20%
C714, 715	ECDEC10J3F	Ceramic, 0.01μF, 3000V AC, +100, -0%
C716	**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C717, 718	**ECEA1CS330**	Electrolytic, 33μF, 16V

■ EXPLODED VIEW



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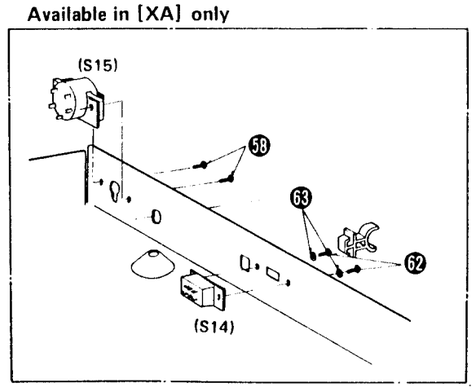
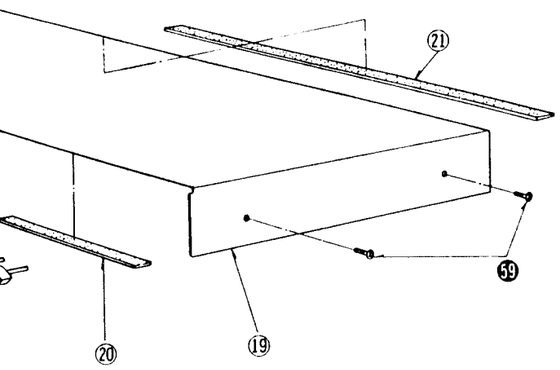
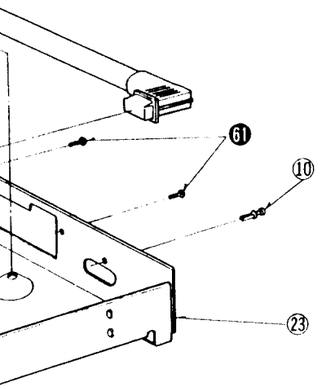
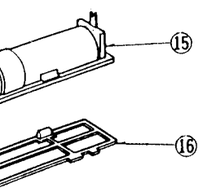




Bar Antenna (L201)





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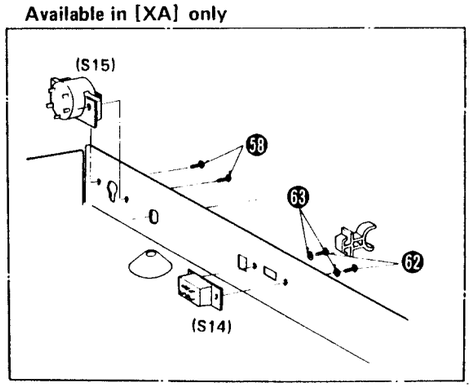

■ REPLACEMENT PARTS LIST (Cabinet, Chassis & Packing Parts)

NOTES: 1. Part numbers are indicated on most mechanical parts Please use this part number for parts orders
2. ⚠ indicates that only parts specified by the manufacturer be used for safety.
3. (E) and (EG) are available in Scandinavia and European only.
(XA) is available in Asia, Latin America, Middle East and Africa only.
(XE) is available in United Kingdom only.
(XGH) is available in Holland only.
(XGF) is available in France only.

Ref. No.		Part No.	Part Name & Description
		CABINET and CHASSIS PARTS	
1		SGWT8055D	Panel Front Ass'y
2		SUS185	Bracket
3		SUS123–2	Spring, Power, Selector and FM AM Muting/FM Mode Switch
4		SBC197–2	Button, Power, Selector and FM AM Muting/FM Mode Switch
5		SUB39	Spacer, Power Switch
6		SDU25–1	Filter, Tinted Plate
7		SGU105	Transparent Cover, Indication Display Panel
8		SHS1011	Fiber, Indication Display Panel
9		SUB29	Coupling Rod, Selector and FM AM Muting/FM Mode Switch
10		SHR401–1	Latch, FM/AM Antenna Terminal and Output Terminal
11		SJF4419–2	Terminal, FM/AM Antenna
12		SJF3207–1	Terminal, Output
13		SHG647	Fiber, Power Transformer
14		RJT202B	Lug, Ground
15		SYE697	Battery Box Ass'y
16		SJB9001	Cover, Battery Box
17		SFSR4N4	Bushing, AC Cord (Product Part No.: SHR127)
17 [XE] only		SFSR5N4	Bushing, AC Cord (Product Part No.: SHR129)
18	⚠	RJA23ZC	AC Cord, Power Source
18 [XE] only	⚠	RJA45ZC	AC Cord, Power Source
19		SKCT8055D	Cabinet, Ass'y
20		SHS1013	Fiber, Cabinet
21		SHS1009	Fiber, Cabinet
22		SKL227	Foot, Bottom Board
23		SGPT8055F	Chassis, SGP1710–1A with Name Plate (SGT20810) (Except Product for [E] and [XA])
23 [E] only		SGP1710–1A	Chassis
23 [XA] only		SGPT8055X	Chassis, SGP1710-2A with Name Plate (SGT20810)

Ref. No.		Part No.	Part Name & Description
		SCREWS and WASHERS	
50		**XTB3+8BFZ**	Screw, Front Panel M'tg
51		**XTB3+8BFN**	Screw, Bracket
52		**XWE3**	Washer, Bracket Screw
53		**XTB3+8BFZ**	Screw, Main P.C.B. M'tg
54		**XTB3+8BFN**	Screw, Power Fuse P.C.B. M'tg
55		**XNG3ES**	Nut, Ground Lug M'tg
56		**XWC3B**	Washer, Ground Lug
57		**XSN3+8BVS**	Screw, Ground Lug
58		**XTB3+16BFZ**	Screw, Voltage Adjustment M'tg
59		**XTB4+8BFN**	Screw, Cabinet
60		**XTB3+10BFN**	Screw, Foot M'tg
61		**XTB3+8BFZ**	Screw, FM/AM Antenna Terminal M'tg
62 [XA] only		**XSN3+6BVS**	Screw, FM/AM Allocation Switch M'tg
63 [XA] only		**XWA3BFZ**	Washer, FM/AM Allocation Switch
		ACCESSORIES	
A1		SJP2129–5	Cord, Connection Shield
A2		SKL235	Foot
A3		SSA267	Cord, FM Indoor Antenna
A4 [XA] only		SJP5213–1	Plug Adaptor, Power Source
		PACKING PARTS	
P1		SPP637	Polyethylene Bag
P2		SPS2295	Pad, Left and Right Side
P3		SPS2297	Pad, Top Side
P4		SPG2265	Carton Box
P4 [XGF] only		SPG2267	Carton Box
P5		SQF10243	Instructions Book, Printed Matter

■ CHANGE OF PARTS LIST

ST-8055K (E), (EG), (XGH), (XA)

NOTES: 1. This parts list included only the changes of the model ST-8055 parts list.
2. (E) and (EG) are available in Scandinavia and European only.
(XA) is available in Asia, Latin America, Middle East and Africa only.
(XGH) is available in Holland only.

Ref. No.	Change of Part No. ST-8055 ➡ ST-8055K		Part Name & Description
	CABINET and CHASSIS PARTS		
1	SGWT8055D	SGWT8055KD	Panel, Front Ass'y
2	SUS185	Deletion	– – – – – – – – – – – – – – – – – –
4	SBC197–2	SBC197–3	Button, Power, Selector and FM AM Muting/FM Mode Switch
19	SKCT8055D	SKCT8055KD	Cabinet, Ass'y
23	SGPT8055E	SGP1710–1B [E]	Chassis
	SGP1710–1A [E] only	SGPT8055KD [EG, XGH]	Chassis, SGP1710–1B with Name Plate (SGT20850)
	SGPT8055X [XA] only	SGPT8055KX [XA]	Chassis, SGP1710–2A with Name Plate (SGT20850)
	SCREWS and WASHERS		
51	XTB3+8BFN	Deletion	– – – – – – – – – – – – – – – – – –
59	XTB4+8BFN	XTB4+8BFZ	Screw, Cabinet
	PACKING PARTS		
P4	SPG2265 / SPG2267	SPG2271	Carton Box

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79086800 ® Y.K.

Schematic Diagram ..... Model ST-8055/ST-8055K

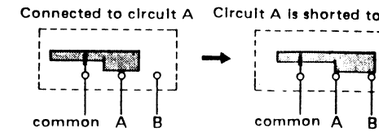
*** This schematic diagram may be modified at any time with the development of new technology.**

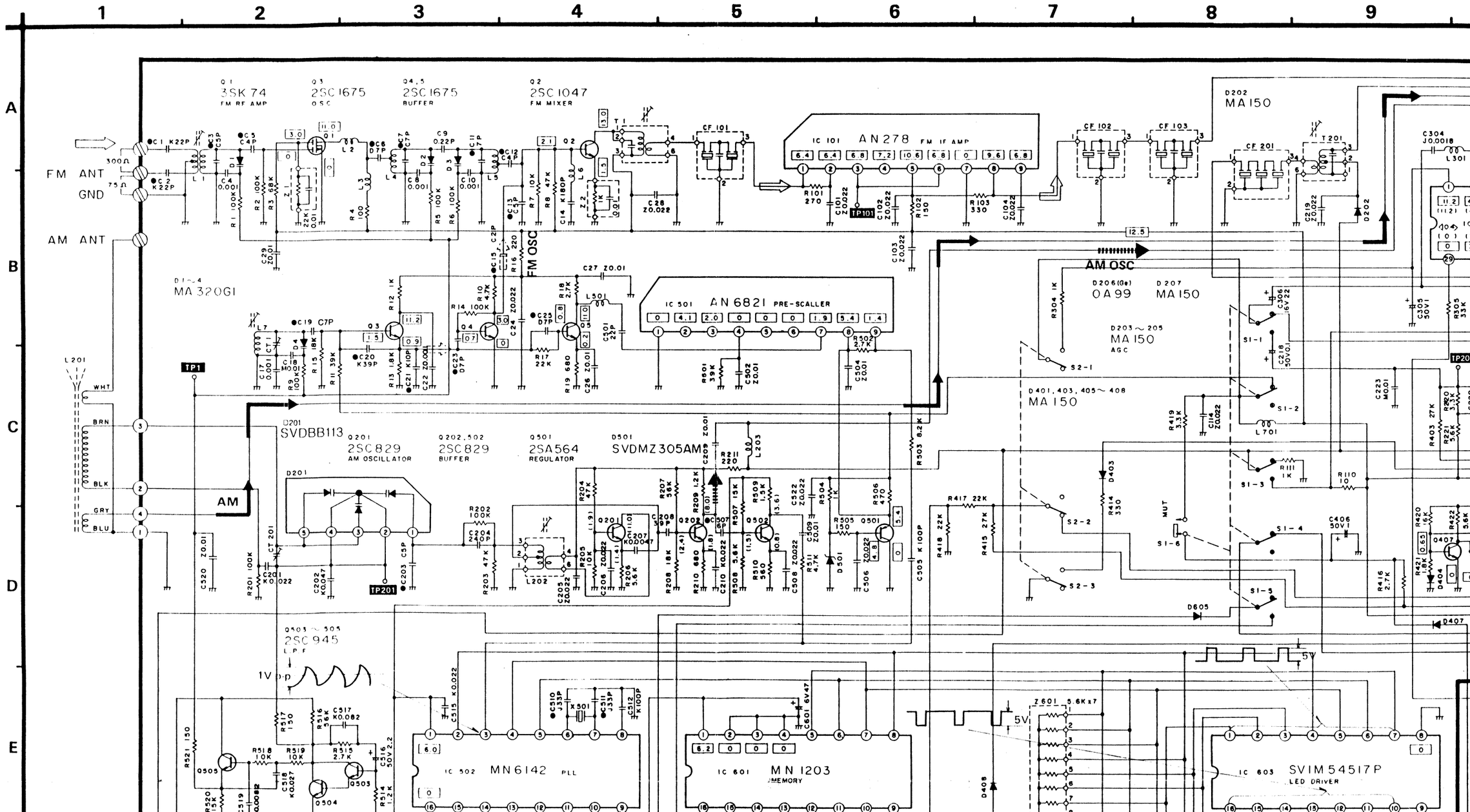
Notes:

1. S1-1～S1-6: Band selector switch in "**FM**" position.
2. S2-1～S2-3: FM-AM muting/FM mode selector in "**on/auto**" position
3. S3: Manual tuning (down) switch.
4. S4: Manual tuning (UP) switch.
5. S5: Memory write switch.
6. S6～S12: Preset-tuning switch.
7. S13: Power source switch in "**on**" position.
8. S14: FM-AM allocation switch ([XA] only)
9. S15: Voltage adjuster switch in "**240V**" position.
   (1) 110 ⟷ (2) 120 ⟷ (3) 220 ⟷ (4) 240
10. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    [ ] Voltage during FM monaural or non-signal reception, ( ) Voltage in AM mode, < > Voltage during FM stereo reception.
    [ ] Voltage during muting circuit operation
    (With muting switch set to ON, a bias is applied to the switching transistor of muting circuit so that the output comes out in case of over 18 dB antenna input and is grounded when the input is less than 17 dB.)
11. ⚠ Indicates that only parts specified by the manufacturer be used for safety.
12. Signal lines ⇨ FM ➡ AM ⋯ AF

Shorting Switch

This unit uses a shorting switch. As illus
In the circuit diagram, the shaded area rep





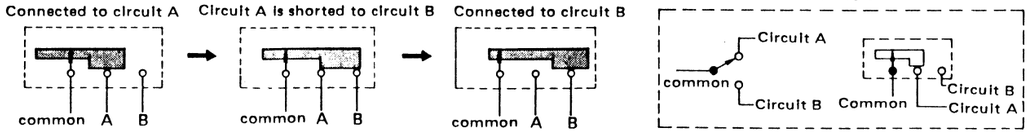
odified at any time with the development of new technology.

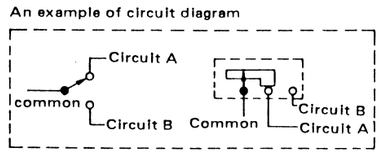
to the
output
rounded

acturer

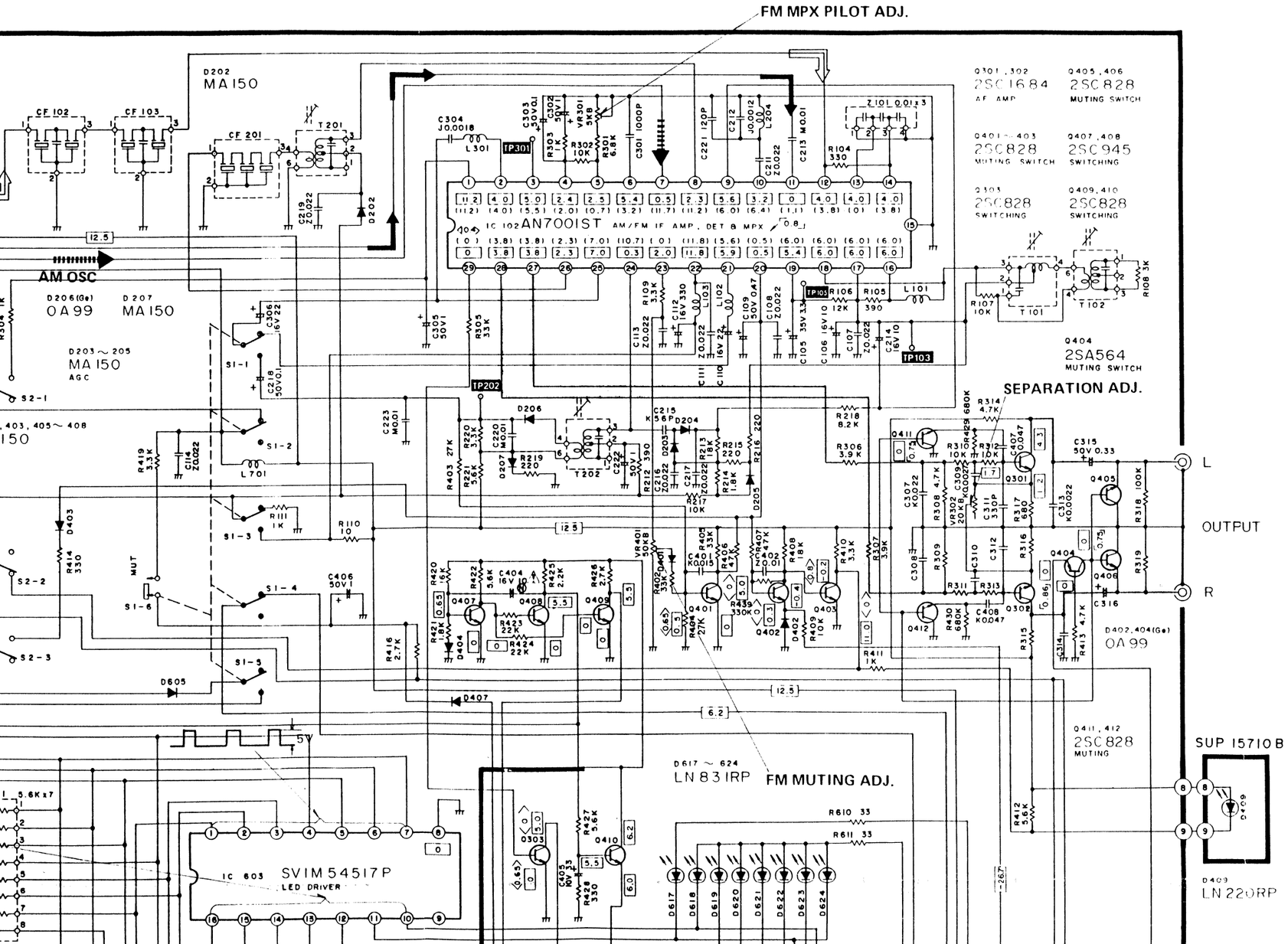
Shorting Switch

This unit uses a shorting switch. As illustrated below, the circuit is shorted to the next circuit without being opened.
In the circuit diagram, the shaded area represents the common terminal.





7 8 9 10 11 12 13



IC 602 MN 1400SJ
MICRO COMPUTER

D601~603, 607~616
MA 150

Q601, 506
2SC 828
SWITCHING 2.78μS

D604, 605
MA 150

SUP 17870

Q602, 603
2SC 828
BUFFER

D701, 702
SVDM1151U

Q701
2SD592
REGULATOR

Q702
2SD793
REGULATOR

D704
MA1130

D706
SVDMZ336B

D703
SVDMZ307A

D705
SVDSR1K2

D707, 708
MA 150

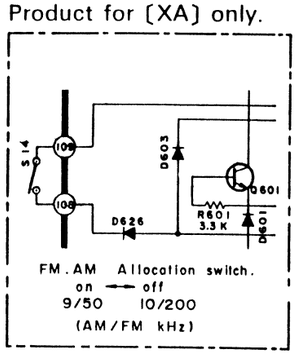
D606
SVDMZ307A

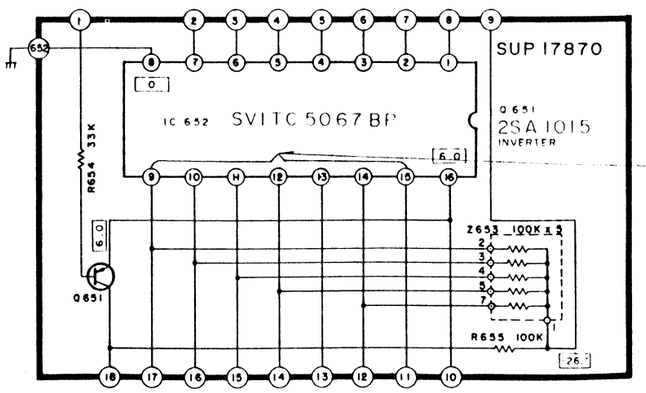
Q703, 704
2SC828
POWER MUTING

AC 50/60Hz
110/120/220/240V

SUP 14710

Product for [XA] only.





SUP 15710A

D606
SVDMZ307A

STEREO
AM
FM
KHz
MHz

SUP 17850

SUP 17870

IC 602 MN 1400SJ
MICRO COMPUTER

D604,605
MA 150

Q602,603
2SC828
BUFFER

Q413
2SC828
MUTING

D706
SVDMZ336B

D403
LN220RP

C603 6V 220
C606 50V 4.7
C607 6V 220
C608 50V 4.7
C717 10V 33

R605 47K
R606 4.7K
R607 5.6K
R608 4.7K
R609 390
R428 330
R431 3.3K
R612 100K
R712 15K
R711 680K
R713 470K
R714 3.3K
R715 10

D604
D606
D708

Q703
Q704

5V